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REVIEW UNDER THE ENVIRONMENTAL ASSESSMENT ACT

prepared by Ministries and
Agencies of the Province of Ontario

**HIGHWAY 407 / TRANSITWAY
(Markham Road Easterly to
Highway 7 East of Brock Road)**

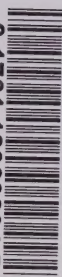
Submitted by:

Ontario Ministry of Transportation
EA File No. TC-CE-02

Review prepared pursuant to subsection 7(1) of the
Environmental Assessment Act,
R.S.O. 1990, c.E-18

December 1997

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NEED MORE INFORMATION

Public Record Locations

You can view the public record for this Environmental Assessment during normal business hours at the following Ministry office:

Ministry of the Environment
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario M4S 1H2
(416) 440-3450

Additional files containing the Environmental Assessment, and a copy of the Review and Notices are available at the following locations:

Ministry of the Environment
Central Region Office
8th Floor, 5775 Yonge Street
Toronto, Ontario M2M 4J1
(416) 326-6700

Ministry of Transportation
Central Region
Planning and Environmental Office
Atrium Tower, 3rd floor
1201 Wilson Avenue
Downsview, Ontario M3M 1J8
(416) 235-5485

Copies of the Review and Notice may also be available for public review at the offices of the Region of Durham, Region of York, City of Oshawa, Town of Ajax, Town of Markham, Town of Pickering, Town of Whitby and Municipality of Clarington.

MAKING A SUBMISSION?

A public review period will follow publication of this Review. During this time, any interested parties can make submissions on the proposed undertaking, the environmental assessment or this Review. Should you wish to make a submission, please send it to:

Mr. George Zegarac, Director
Environmental Assessment Branch
Ministry of the Environment
250 Davisville Avenue, 5th floor
Toronto, Ontario M4S 1H2

RE: Highway 407/Transitway Environmental Assessment

Under the Freedom of Information and Protection of Privacy Act and the Environmental Assessment Act, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in all submissions become part of the public record files for this matter and can be released if requested.

**REVIEW OF THE
ENVIRONMENTAL ASSESSMENT**

**HIGHWAY 407 / TRANSITWAY
(MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD)**

Submitted by:

**The Ontario Ministry of Transportation
EA File No. TC-CE-02**

**Review prepared pursuant to subsection 7(1) of the
Environmental Assessment Act, R.S.O. 1990, c.E-18
Province of Ontario**

December, 1997



PREFACE

On January 1, 1997, amendments to the *Environmental Assessment Act* (EAA) came into force through the introduction of the *Environmental Assessment and Consultation Improvement Act* (amended Act). Since the proponent (the Ministry of Transportation) completed their environmental assessment before the EAA was amended and at the request of the proponent (Appendix 1), the environmental assessment documentation has been assessed against the requirements of the EA Act, R.S.O. 1990, c.E-18.

However, notwithstanding the previous paragraph, the Minister of the Environment, upon receiving a request from the Ministry of Transportation (MTO), has the authority under section 12.4(3) of the amended Act to order that certain provisions of Part II of the Amended Act apply to the MTO's application.

The Minister of Transportation has submitted the Highway 407/Transitway environmental assessment (EA) in accordance with the transition provisions of the amended Act. As such, the Ministry of Transportation has requested that Part II of the previous EAA apply; and that those provisions with respect to mediation and the activities permitted prior to approval by Section 12.2, apply to MTO's EA. This includes the following requirements and provisions:

- i) publication, by the proponent, of a Notice of Submission in a local newspaper(s) announcing the submission of the environmental assessment to the Minister of the Environment;
- ii) removal of the Notice of Acceptance decision from the EA approval process;
- iii) the option to impose mediation should certain parties be unable to resolve certain matters; and
- iv) the ability to scope a hearing should a decision be made to refer certain matters to the Environmental Assessment Board for a decision.

In view of the Minister of Transportation's request and the publication, by the MTO, of a Notice of Submission in a number of local newspapers (Appendix 1), the Ministry of the Environment has agreed to remove the Notice of Acceptance decision from the EA process, and will consider the application of the provisions related to mediation and the scoping of a hearing, at such time as the need may arise.

Following publication of the Notice of Completion and the end of the public review period, the Minister will consider submissions from the public and government agencies. Any person has the right to submit to the Minister comments on the proposed undertaking, the environmental assessment, this review document and the ministry's proposal to apply the new provisions of the Amended Act to the proposal. Any person also has the right, subject to the discretion of the Minister, to require a hearing. The Minister will either approve the application, refer certain matters to mediation, refer the entire application (or certain matters) to the Environmental Assessment Board, or reject the entire application.

EXECUTIVE SUMMARY

Ministry of Transportation

Highway 407/Transitway Environmental Assessment (Markham Road Easterly to Highway 7 East of Brock Road)

This Review concludes that the Ministry of Transportation's (MTO) submission seeking approval for an easterly extension of the Highway 407/Transitway from Markham Road to Highway 7, east of Brock Road, in the Region's of York and Durham, addresses subsection 5(3) of the *Environmental Assessment Act*, R.S.O. 1990, c.E-18 (EAA). There are no federal, provincial or local agencies opposed to the application. These agencies have indicated that their concerns, if any, can be addressed at the detailed design phase of the proposal.

The Regional Municipality of Durham has requested that the Ministry of Transportation consider a by-pass of the community of Green River as part of the proposal, while the Town of Whitby has raised concerns with potential interim traffic impacts east of Highway 407's proposed terminus just east of Brock Road. However, both the Region and the Town have indicated support for the proposal and continuation of the highway beyond the section of highway proposed in the environmental assessment. Other municipalities either made no comment or supported the proposal, and indicated their concerns, if any, could be addressed during design phase of the project.

Submissions from members of the public and non-government organizations have identified a number of concerns including, but not limited to, the need for the highway, the examination of alternatives, the environmental impacts of the proposed undertaking and the time made available for public review of the environmental assessment. Some of these issues can be addressed during the design phase of the project, while certain other issues are related more to government policy/direction with respect to transportation and are beyond the scope of the EA and this Review.

If the proposed undertaking is approved by the Minister, it will allow MTO to construct, operate and maintain what will ultimately be a 10 lane freeway from Markham Road easterly to Highway 7, just east of Brock Road. The approval will also allow for the future implementation of a transitway in a separate corridor adjacent to Highway 407. The approval will include all associated interchanges, grade separations, road realignments and stormwater management facilities identified in the environmental assessment, and described in more detail in Section 2 of this Review.

The executive summary for the proponent's environmental assessment document can be found in Appendix II of this Review document.

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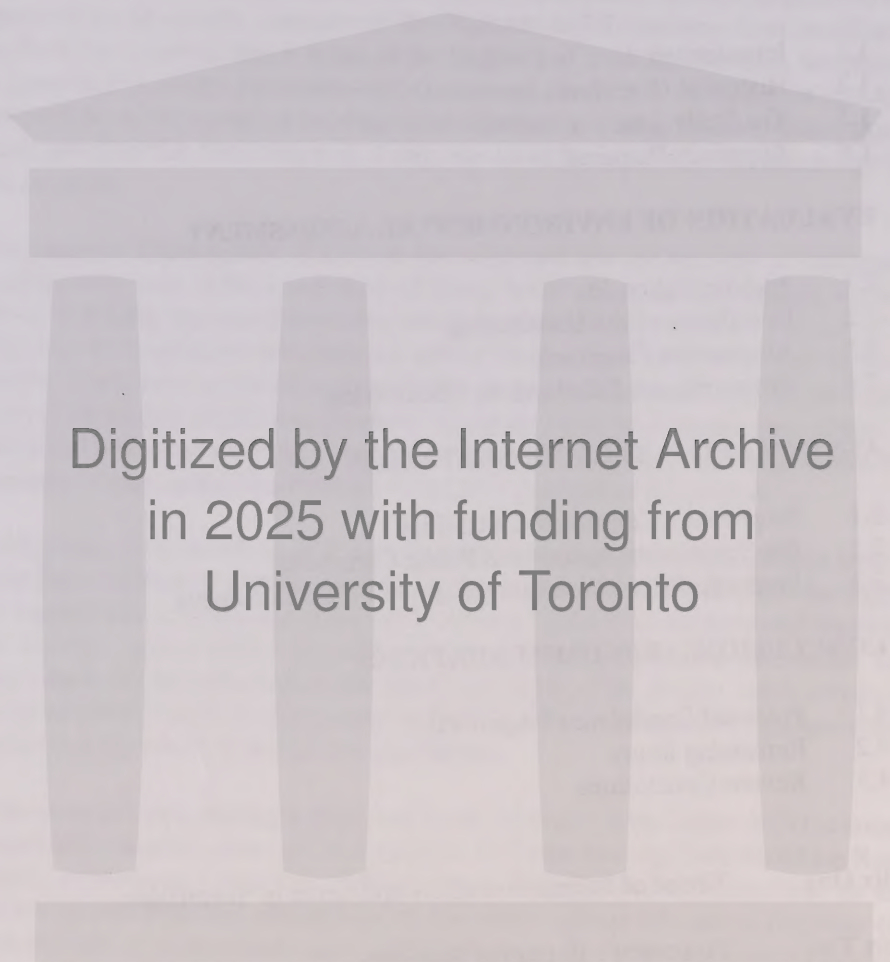
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1.0 BACKGROUND

1.1 Introduction

This Review has been prepared by staff of the Environmental Assessment Branch (EA Branch), of the Ministry of the Environment (MOE), in co-operation with various provincial and municipal government agencies and input from the public.

The Review evaluates the Highway 407 / Transitway environmental assessment (EA), submitted by the Ministry of Transportation (MTO), based on the requirements of the *Environmental Assessment Act* (EAA). It should be noted that the EA was prepared under the requirements and provisions of the former EAA (Revised Statutes of Ontario, 1990). Consequently, the EA is being processed under the former Part II of that Act, as per subsection 12.4(1) of the amended Act. The provisions of the previous Act have been used to determine the adequacy of the EA document and any supporting documentation. All references to the EAA in this Review document (unless otherwise noted) refer to the Revised Statutes of Ontario 1990 (R.S.O. 1990), and **not** the amended Act.

It is not the purpose of the Review to decide whether the MTO's application should be approved under the EAA. That decision is made by the Minister of the Environment or, upon referral, the Environmental Assessment Board (EA Board). Instead, the Review assesses whether MTO has complied with subsection 5(3) of the EAA. The conclusions rendered in this Review represent one of many pieces of information the Minister considers before making a decision pursuant to Section 9 of the amended EAA. As per Section 9, the Minister will make one of the following decisions:

- give approval to proceed with the undertaking;
- give approval to proceed subject to such conditions as the Minister considers necessary;
- refuse to give approval to proceed with the undertaking; or
- refer either part or the whole matter to the Environmental Assessment Board for a decision.

Publication of the Notice of Completion of Review and this Review initiates a public review period. During this review period any person has the right to submit to the Ministry, comments on the proposed undertaking, the environmental assessment, this review document and the ministry's proposal to apply the new provisions of the amended EAA to the proposal. Any person also has the right, subject to the discretion of the

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(Markham Road Easterly to Highway 7 East of Brock Road)

Minister, to require a hearing. Those persons who submit comments to the Ministry during the period set out in the Notice of Completion of Review will be notified, in writing, of the Minister's subsequent decisions.

This Review is prepared in four main sections. The first section provides a brief overview of the undertaking. The second sections provides an analysis of the documentation as it relates to the required components of subsection 5(3) of the EAA. A summary of issues identified by federal, provincial and government agencies and the public following submission of the EA is presented in the third section, while the last section summarizes the conclusions of the review. The last section proposes conditions, if and where applicable, to address remaining concerns with the project and identifies issues that remain unresolved. Certain segments of the EA have been reproduced verbatim in this Review (as indicated by italics) to assist the reader and avoid the need to continually reference the EA. However, for a detailed description of the activities undertaken by the proponent, the reader should make reference to the appropriate section of the EA.

1.2 Historical Overview

Highway 407 was initially considered during the 1940s and 1950s and, since that time, has been incorporated into the planning of all major transportation and land use decisions, for what is now known as the Greater Toronto Area (GTA). Construction of parts of Highway 407 between Highway 403 in the Regional Municipality of Peel and Markham Road in the Regional Municipality of York, was initiated during the 1980s, and is ongoing with planned completion in 1998. This portion of Highway 407 was protected as part of the Parkway Belt West Plan¹, and was carried out in accordance with the provisions of exemptions issued under section 29 of the EAA (R.S.O. 1990)². These exemptions allowed for the planning, design, construction and operation of Highway 407 from a proposed intersection in the Town of Oakville easterly a distance of about 63 km. to Highway 48 in the Town of Markham. These exemption were issued based on the fact that this section of the proposed highway was entirely within the Parkway Belt West and had already been subject to public study.

The Ministry of Transportation's original schedule for the construction of Highway 407 between Highway 403 in Oakville and Highway 35/115 in Clarington, anticipated a

¹ The Parkway Belt West Plan was approved by Order-in-Council 2188/78 on July 19, 1978.

² Order-in-Council 2487/80 (Sept. 17, 1980) and Order-in-Council 2865/83 (Nov. 3, 1983)

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program that would meet the traffic demand without adversely affecting the local road system. However, in the early 1990s, the Province announced an accelerated program to develop, design and build Highway 407 from Highway 403 in the City of Mississauga to Markham Road (Highway 48) in the Town of Markham. The accelerated program requires that Highway 407 be completed to Markham Road in 1998. Consequently, in 1995, the MTO undertook to identify and evaluate various options for addressing the potentially significant traffic problems that might develop in the Markham area as a result of the temporary termination of Highway 407 at Markham Road.

The Ministry's traffic analysis, discussed in detail in Chapter 2 of the EA, demonstrated that the opening of Highway 407 to Markham Road in the absence of an extension easterly, would result in significant traffic related impacts in the Town of Markham. The analysis indicated a need for additional road and transit capacity within the Highway 7 corridor east of Markham Road to address existing deficiencies and future requirements. It was on this basis that the MTO initiated the planning for a Highway 407/Transitway corridor east of Markham Road.

1.3 The Study Area

The study area identified by MTO for the purposes of the system planning phase and transportation system analysis included the Greater Toronto Area (GTA) and adjacent regions influencing the travel demands within the GTA. This study area was used to *"ensure that an 'area-wide' perspective of the transportation issues and opportunities was considered in the context of the study"*.

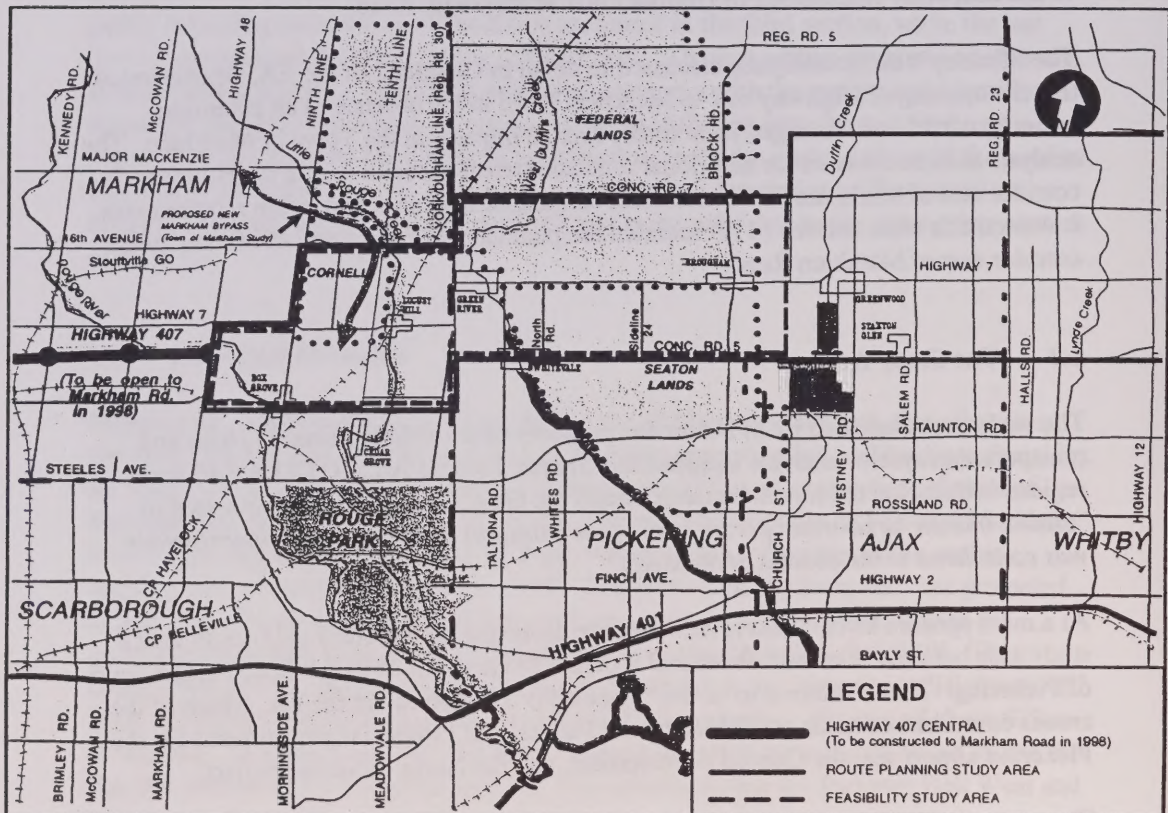
At a more specific level, when reviewing extension/staging options, MTO considered a study area between Markham Road and Sideline 14 (just east of Brock Road) in the Town of Pickering. This is referred to as the *"Feasibility Study Area"* in the EA. Much of the area is comprised of lands assembled by the Federal and Provincial governments for the Pickering airport site, the Cornell development, and the North Pickering project.

The particular considerations taken into account by the proponent, in identifying the study areas, are discussed in more detail in Section 1.4 of the EA. Figure 1 provides an overview of the Route Planning Study Area and the Feasibility Study Area. For the purposes of this Review, any reference to study area refers only to the Feasibility Study Area.

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Figure 1

Study Area



1.4 Approvals Required

As a result of the planning studies, the Ministry of Transportation is now seeking an approval under the EAA for an extension of Highway 407 from Markham Road (Highway 48) easterly to connect with Highway 7, just east of Brock Road. The proposed highway will ultimately be a 10 lane freeway, but is to be constructed in stages corresponding to existing / future traffic demands. In addition, approval is being sought for the future implementation of a transitway in a separate corridor adjacent to this section of Highway 407.

MTO may require approval under provincial statutes and regulations, other than the EAA, before all or portions of the proposed Highway 407/Transitway can be constructed. Although these approvals may be granted by agencies other than the MOE, **none** of these additional approvals can be issued until the proposed undertaking receives approval under the EAA.

In addition to other provincial approvals, the proposal may trigger the *Canadian Environmental Assessment Act* (CEAA) via potential authorizations related to the Navigable Waters Protection Act (NWPA) and the Rouge River crossing, the Canadian Transportation Act and the crossing of a CPR railway line, and the Fisheries Act and various stream crossings. These authorizations can only be obtained if the EA receives approval at the provincial level.

2.0 EVALUATION OF THE ENVIRONMENTAL ASSESSMENT

2.1 Purpose/Rationale

2.1.1 Purpose of the Undertaking

The EAA requires the proponent to define the purpose of the undertaking. The purpose statement sets the parameters for the identification and evaluation of alternatives. It should describe the desired "end", with the proposed undertaking providing the "means" to reach that end. The purpose may be presented as the problem or opportunity the proponent has chosen to address.



The MTO has identified the purpose of the proposed undertaking in terms of a problem/opportunity. The Ministry has summarized the transportation related objectives of the study as follows:

- *To address prevailing and future transportation / traffic problems across the Metro-York / Durham boundary including the mitigation of existing traffic problems in communities within Markham and Pickering;*
- *To address anticipated traffic-related concerns in the Markham area that may result from the termination of Highway 407 at Markham Road;*
- *To ensure that the proposed undertaking is compatible with the long-term transportation system needs across the Metro-York / Durham boundary and within Durham Region, as identified through earlier planning studies; and*
- *To ensure that the need to protect for long-term transportation facility needs (road and transit) in the proposed Highway 407 / Transitway corridor is acknowledged through the analysis.*

The Ministry further states that:

"It is fundamental to recognize that, although the premise behind the proposed undertaking is to minimize the impact of terminating Highway 407 at Markham Road on local communities to address existing deficiencies across the Metro-York / Durham boundary, there is also a need to assess the justification for a proposed facility in the wider

Regional and Provincial context. In assessing the need for the facility; engineering, social and natural environment, and economic factors must be recognized and addressed."

2.1.2 Rationale for the Undertaking

Appendix 8 provides a description of the rationale for selecting the route alternatives evaluated in Chapter 5 of the EA. In Section 5.4.4 of the EA, MTO summarizes the rationale or reasons for selecting the Technically Preferred Alternative. This alternative was selected through a technical evaluation process and refined via the public consultation process. MTO states that the route was "*deemed to be optimal from a number of standpoints including:*"

- *The route takes maximum advantage of opportunities to avoid social, environmental, and engineering constraints identified through the data collection process;*
- *The route minimizes impacts upon established communities;*
- *The route is the most compatible with federal, provincial and municipal policy initiatives; and*
- *The preferred alternative is reasonably direct through the study area.*

2.2 Description of the Undertaking

The EAA requires that the proponent provide a description of the undertaking. This explains what the proponent is seeking approval for. This description sets out what the proponent will be legally committed to upon receiving approval under the EAA.



In April of 1997, the MTO submitted an environmental assessment to the Minister of the Environment seeking approval under the EAA for the Technically Preferred Route. This route is described in the EA as "an ultimate ten-lane freeway with an adjacent transit corridor, with a basic minimum right-of-way of 160m." The freeway will be 15.9km. in length and consist of seven interchanges; grade separations at those crossroad locations that are to remain open; six bridged watercourse crossings; and, one railway grade separation. The remaining 60m. of right-of-way will be used for the 15.9km. transit corridor. It will also consist of grade separations and road crossings; six bridged watercourse crossings; and, one railway

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grade separation. The undertaking is described in detail in Section 6.0 of the EA and shown in Figure 2 of this Review.

If the undertaking is approved as described in the EA, it will allow the MTO to do the following:

- *construct, operate and maintain a freeway (up to 10 lanes) with a basic minimum 100m right-of-way from Markham Road easterly to Highway 7 east of Brock Road;*
- *construct, operate and maintain a transitway with a basic minimum 60 metre right-of-way from Markham Road easterly to Highway 7 east of Brock Road;*
- *construct full interchanges at Markham Road, the 9th Line, Markham Bypass, the Durham-York Line (Regional Road 30), and Brock Road;*
- *construct two interchanges between the Durham-York Line and Brock Road at specific locations to be determined at a later date as part of the Seaton planning process (See Section 4.5.1 of the EA for a description of the Seaton development proposal);*
- *construct a realignment of Highway 7 and 11th Line at the Durham-York Line to allow for the interchange;*
- *construct a connection to Highway 7, east of Brougham permitting access to and from both the east and the west;*
- *construct grade separations at 10th Line in Markham, and Sidelane 16 in Pickering; and,*
- *acquire property for, and construction of, associated features such as stormwater management facilities.*

In addition to the above, approval of the undertaking will allow MTO or its agent(s) to:

- *refine the alignment and property requirements for the undertaking during the design phase;*
- *designate the right-of-way for the recommended alignment;*
- *acquire property necessary for implementation of the undertaking; and*
- *construct, operate and maintain the completed highway and transitway.*

Although the approval being sought is for the ultimate 10 lane freeway with the transitway, MTO has stated in the EA that “implementation of the undertaking will take place over a number of years and reflect financial constraints and traffic/transit demands”.

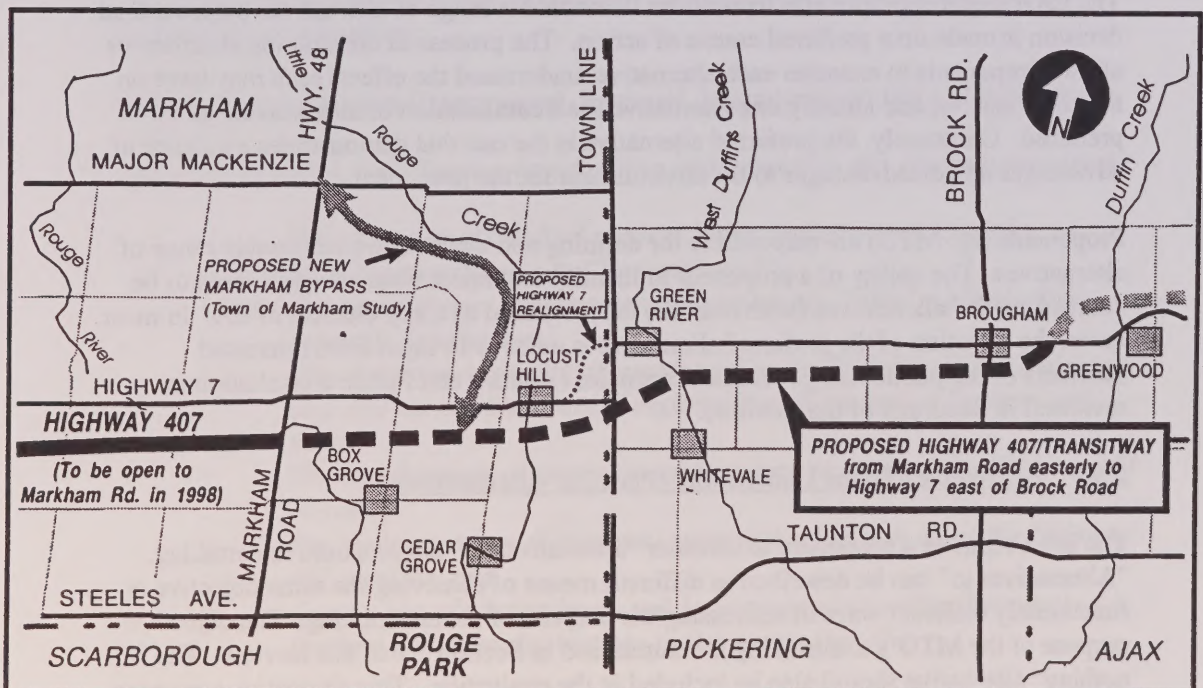
Initial construction will probably consist of a 4 lane freeway (2 lanes per direction), plus auxiliary lanes where required. The additional lanes, up to the ultimate 10 lanes, will be added as traffic demands grow and as downstream roadway capacity is put in place to

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handle the added traffic. Phased implementation of the undertaking could also include opening the highway to traffic as sections become available; staging some interchanges and grade separations with at grade intersections initially; staging of interchange ramps to provide for moves restricted to certain directions initially with others being added when traffic demands/network development warrant; provision of an interim connection at Highway 7 east of Brock Road; and, construction of a Transitway in a separate corridor adjacent to Highway 407.

Figure 2

The Undertaking



2.3 Alternatives Examined

This section reviews the Ministry of Transportation's examination of alternatives in terms of compliance with the provisions of subsection 5(3) of the EAA.

The EAA requires that 'alternatives to' and 'alternative methods' of implementing a particular type of undertaking be considered. While not required by the EAA, the "do nothing" alternative should also be considered. The "do nothing" alternative serves as a bench mark, from which the advantages and disadvantages of the alternatives are identified and evaluated.

The decision on what constitutes a reasonable range of alternatives remains the proponent's responsibility, subject to approval by the Minister or the EA Board.

The EAA requires proponents to consider a reasonable range of alternatives before a final decision is made on a preferred course of action. The process of considering alternatives allows proponents to examine each alternative, understand the effects each may have on the environment, and identify one alternative (or a combination of alternatives) as preferred. Commonly, the preferred alternative is the one that demonstrates a balance of advantages and disadvantages to the environment for the proponent.

Proponents (eg. MTO) are responsible for defining and evaluating a reasonable range of alternatives. The ability of a proponent to identify and reject what are considered to be "unreasonable" alternatives (with reasons) is recognized as a key element of EA. In most cases, the selection of the preferred alternative is made with input from interested members of the public and government agencies (Agency and Public consultation is reviewed in Section 3 of the Review).

2.3.1 Alternatives To the Undertaking (Planning Alternatives)

The EAA requires a proponent to consider "alternatives to" the proposed undertaking. "Alternatives to" can be described as different means of achieving the same objective or functionally different ways of addressing the purpose of the undertaking. The objective/purpose of the MTO's undertaking is summarized in Section 2.1 of this Review. The "do nothing" alternative should also be included in the evaluation. This alternative represents a bench mark from which all other alternatives can be evaluated.

Chapter 3.0 of the EA documents the MTO's consideration of "alternatives to" with respect to resolving the transportation/traffic problems resulting from the termination of

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Highway 407 at Markham Road and the current and projected mobility problems across the Metro-York/Durham boundary. The MTO refers to these alternatives as “planning alternatives”.

The MTO identified and evaluated the following planning alternatives:

Do Nothing Alternative

The MTO included this alternative to provide a base to permit comparison with the other planning alternatives. Under this planning alternative, no measures to improve or increase vehicular and/or person trip capacity in and through the Durham Region and across the Metro-York/Durham boundary were considered. The Ministry indicates that the “Do Nothing”, or base alternative assumes that Highway 407 will be completed and open to Markham Road from the west, in 1998 and that it also takes into account, the widening of Highway 401 to Brock Road in Pickering (currently under construction). This is consistent with the concept of the “do nothing” alternative as a base from which to evaluate other alternatives.

Improve Transit Services (Interregional, Regional, Intermunicipal, GO and Rail Transit

The MTO identified the following opportunities with respect to this alternative solution:

- *The expansion of GO Rail services along the Lakeshore Corridor including an extension to Clarington and/or;*
- *The establishment of commuter rail service on CP Rail’s Havelock or Belleville Subdivisions;*
- *The expansion of municipal transit service (ie. TTC, Markham, Pickering, etc.) And the establishment of regional transit systems in Durham and York;*
- *The establishment of interregional transit services along the Highway 401 corridor;*
- *The implementation of improved interregional service along the Highway 407 corridor; and*
- *Greater use of existing heavy rail by commuters travelling between Durham and other destinations to the west in the GTA.*

Implement Transportation System Management Measures (TSM)

Transportation System Management (TSM) measures include various methods of maximizing existing infrastructure capacity. According to the MTO, typical TSM

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measures might include, but not be limited to, the implementation of improved traffic signal timing equipment, improved signal timing and phasing, and widening of intersections to accommodate turning lanes, and utilization of Intelligent Traffic Systems such as the Highway 401 Freeway Traffic Management System. The MTO considered these typical TSM improvements for the existing major transportation routes crossing the Metro-York/Durham boundary and within Durham Region.

Promote Transportation Demand Management Improvements (TDM)

The MTO indicates in the EA that TDM strategies can be grouped into a number of broad categories including, voluntary efforts (ride sharing, trip chaining, improved telecommunications, activities scheduling, etc.), regulatory efforts (parking controls, right-of-way reallocation, preferential treatment for High Occupancy Vehicles-HOV's, auto disincentives, etc.) and growth/land management. Considering the significance of growth/land management in the study area, the MTO has chosen to consider this particular category as a separate alternative. The Ministry further identifies a number of measures which might have an impact within the study area. These measures included:

- *Trip sharing;*
- *Trip chaining (several trips made as part of a home-work or work-home trip, such as shopping, day-care, etc.);*
- *HOV (High Occupancy Vehicles) system development; and*
- *Telecommuting, etc.*

Upgrade Arterial/Municipal Roadways

This alternative would consist of road widening to increase the “through” lane capacity of existing regional arterials and/or municipal roadways. The MTO indicates that this could include the widening of existing roadways to provide for HOV or transit only lanes to increase the overall person trip capacity across the Metro-York/Durham boundary. The Ministry also included the possible widening of Highway 7 as a component of this alternative.

Encourage Community Growth Management

The Ministry considered this as a separate alternative, as opposed to a component of the TDM alternative, because of its future potential in terms of reshaping or influencing the trip making characteristics of Durham residents. The EA states that the “*Management of growth within Durham Region would consist of implementing planning and development strategies or policies to increase the employment to population and live/work ratios*”

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within Durham, thereby, reducing the number of work trips across the Metro-York/Durham boundary". The MTO further states that "The Region of Durham's Official Plan contains policies and goals directed at increasing the Region's self containment in terms of commuter travel demands".

Extend Highway 407 Easterly (With protection for transitway facilities)

This alternative would involve the construction of a new section of Highway 407 easterly from Markham Road. The MTO describes the extension as initially consisting of "a four lane fully access controlled highway within a corridor protected to allow an ultimate ten lane cross section with a "higher order" transitway facility which would then parallel the roadway."

The above mentioned alternatives were evaluated using the following six comparative criteria groups:

- Transportation;
- Natural Environment;
- Social Environment;
- Economic Environment;
- Cultural Environment; and
- Engineering.

Within each criteria group, sub factors were established to describe and measure the impacts of each alternative. The sub factors used for assessing the alternatives are listed below, and described in more detail in Chapter 3.0 of the EA.

Transportation

- accommodation of future demand (person-capacity and vehicular-capacity)
- safety
- recreational traffic demands
- emergency services

Natural Environment

- vegetation
- wildlife habitat
- fisheries

Social Environment

- property impacts (including traffic infiltration)

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- agricultural impacts
- noise impact
- aesthetics

Economic Development

- re-development/development potential
- satisfy official plan goals, objectives, policies
- accessibility/impact to employment areas

Cultural Environment

- built heritage structures
- archaeological resources

Engineering

- impact on capacity during construction
- utility conflicts

The MTO undertook an evaluation of each alternative using these six criteria groups and their corresponding sub factors. The results of this evaluation are provided in Table 3.2.2 and discussed in Section 3.3 of the EA. Based on the evaluation, the MTO concluded that extending Highway 407 (4 travel lanes initially) east of Markham Road was the preferred planning alternative to resolve existing short term capacity deficiencies across the Metro-York/Durham boundary and traffic problems within communities located in the Highway 7 corridor. The Ministry also concluded that the other planning alternatives considered within the assessment could not, on their own, provide sufficient relief to cross boundary travel requirements in the short term. The detailed reasons for the Ministry's decision can be found in Section 3.4 of the EA. The following, are the MTO's "key" reasons for the recommended planning alternative:

- *In the short term, the easterly extension of Highway 407 provides the maximum relief to existing community problems and east-west capacity constraints across the Metro-York/Durham boundary without the extension of this highway beyond Markham Road, and the future construction of a higher order transit facility adjacent to the roadway, existing communities will be seriously impacted by increased traffic volumes;*
- *The easterly extension of Highway 407 represents a critical component of the future transportation networks for the Regions of Durham and York as previously identified in the Highway 407 Overview Study and the Regional Official Plans;*

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- *The easterly extension of Highway 407 will provide the opportunity to protect an appropriate right-of-way that allows for higher order transit service in the future; and*
- *Improved transit services, TSM and TDM measures, upgrading of existing arterials and municipal roadways and community growth management within Durham, will not solve short term transportation problems.*

2.3.2 Alternative Methods (Route Planning Alternatives)

Alternative methods of carrying out the preferred undertaking can be described as different ways of building a facility and/or different locations for the facility. Following the decision that an extension of Highway 407 east of Markham Road was the preferred planning alternative, the MTO investigated a number of alternative route alignments for the new road/transitway.

The Ministry initially developed conceptual route alternatives which best avoided

Evaluating alternatives involves three specific steps:

- 1) The identification of the environmental effects of each alternative. To ensure that a balanced picture of the likely environmental effects an alternative may have is presented, both positive and negative effects should be presented.
- 2) The identification of the actions or measures to mitigate or prevent such effects. The application of mitigation measures enables a "net" effects analysis to identify the effects to the environment of each alternative after mitigation.
- 3) The identification of the advantages and disadvantages of each alternative. This includes those effects that may not be possible to completely prevent, as well as what is involved in achieving various levels of mitigation.

constraints identified in the study area. These constraints are discussed in detail in Section 5.4.1 of the EA, under six major factor groups, as identified below:

- *natural environment* (eg. environmentally sensitive areas, watercourses significant fisheries habitat, significant vegetation/wildlife habitat/wetlands);

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- *social environment* (eg. existing and planned development within the Towns of Markham and Pickering; existing and future boundaries for the hamlets of Box Grove, Locust Hill, Green River, Whitevale, and Brougham);
- *economic environment* (eg. proposed developments such as Cornell, Seaton and the Pickering Airport lands);
- *agriculture* (eg. locally significant agricultural enterprises);
- *cultural environment* (eg. historical and archaeological resources); and
- *transportation and engineering* (eg. geotechnical conditions, existing utilities).

The initial route alignment alternatives were screened for technical feasibility and then further refined, prior to being reviewed during the first round of consultations. Comments received by the Ministry during the first round of consultations were reviewed and incorporated into the next level of screening and refinement of the route alternatives. The MTO then undertook an analysis and evaluation process which led to a Technically Preferred Route. A second round of external consultations was used for further assessment and refinement of the Technically Preferred Route. A review of the MTO's consultation activities can be found in Section 3.0 of this Review.

In order to undertake the analysis and evaluation process, which led to the identification of the Preferred Route, the MTO developed a set of evaluation criteria through iterative consultation with stakeholders. The evaluation criteria were consolidated within the same six factor groups as identified above, and are described in detail in Appendix 1 of the EA. Within these groups, the MTO developed a total of 26 analysis/evaluation factors and 88 associated quantitative or qualitative indicators of potential condition changes (benefits and adverse impacts) and cross-referenced them with identified areas of concerns. The Ministry considered both short term and long term potential condition changes and resultant effects. The significance of adverse impacts was considered, as was the extent to which they might be mitigated and the resultant residual or net effects. The EA notes that the significance of net effects related to their importance in local, regional or provincial contexts.

The evaluation of route alternatives used a comparative analysis and iterative evaluation process. Appendix 7 of the EA provides a detailed description of the evaluation methodology used in identifying the Technically Preferred Alternative, including the

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significance rating (ie. weighting) given to each of the six factor groups. The EA notes that alternative routes were selected to avoid existing communities/residential development and development commitments/proposals, minimize impacts to the Whitevale ESA, minimize encroachment on the Cornell development area, minimize disruption to plans for the airport and Seaton lands, minimize impacts to the north-south valley systems, and minimize impacts to residences and farm operations. Appendix 8 of the EA provides a rationale for selecting the various route alternatives.

Following the identification of the route alternatives, twelve alternative route segments were developed and paired for comparison purposes. Exhibit 5.4.1 of the EA identifies these paired segments. A step-wise comparison of the paired route alternative segments was then carried out using the 88 indicators. The potential impacts of each paired alternative segment with respect to each of the evaluation indicators are presented in tabular form in Appendices 9 to 15 of the EA. Chapter 5 of the EA presents, for each paired comparison, a figure summarizing the comparison and the rationale for selecting the preferred alternative.

The MTO emphasizes in the EA that throughout the evaluation process, the numerical scoring/rating of alternatives was used primarily as a means of focusing on and enhancing a rational decision-making process and verifying selections made on the basis of best professional judgement.

In summary, the MTO notes that the selected route was identified as the Technically Preferred Route through the technical evaluation process and refined through the public consultation process. This route was deemed to be optimal by the MTO for the following reasons:

- *The route takes maximum advantage of opportunities to avoid social, environmental, and engineering constraints identified through the data collection process;*
- *The route minimizes impacts upon established communities;*
- *The route is the most compatible with federal, provincial and municipal policy initiatives; and*
- *The preferred alternative is reasonable direct through the study area.*

Section 5.5 of the EA discusses the partial extension alternatives, for the Technically Preferred Alternative, that were considered to address concerns raised by the Town of Markham and Regional Municipality of York regarding the increased traffic volumes associated with the opening of Highway 407 to Markham Road in 1998. Four basic options were selected from a larger group of initial options, based on the conclusions of

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the Route Planning Study (ie. identification of the Technically Preferred Alternative); comments from the municipalities; the results of the transportation analysis (summarized in Chapter 2 of the EA); the location of existing communities within the study area; and potential impacts. The EA states that:

The alternatives included the Do Nothing Alternative (i.e. not proceeding with a partial extension of Highway 7 east of Markham Road at this time) and three alternative extensions. The extension options were developed by selecting incrementally longer segments of the technically preferred route for Highway 407 identified through the Route Planning Study, starting at Markham Road. Incrementally longer segments were considered in order to assess the traffic and community effects of moving the Highway 407 terminus further east. The easterly limit for the alternatives was a location where the Technically Preferred Route for Highway 407 could be connected to Highway 7 east of Brock Road. This was considered to be the farthest easterly extension of Highway 407 that would be necessary to reduce the projected traffic volumes on Markham Road while minimizing potential traffic increases in existing communities.

In view of the above, the MTO identified the following alternatives:

- Do Nothing;
- Extend Highway 407 to the Markham Bypass;
- Extend Highway 407 to the Durham-York Line (York Regional Road 30); and
- Extend Highway 407 to Highway 7 east of Brock Road.

The benefits of each alternative were evaluated using criteria similar to those used to evaluate the alternative routes. These criteria are discussed in detail in Section 5.5.3 of the EA, and were as follows:

- Transportation
- Natural Environment
- Social Environment
- Economic Environment
- Agricultural Environment
- Cultural Environment
- Cost/Revenue
- Property

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The results of the assessment were presented to agencies, municipalities, special interest groups and the public. A summary of the results of the assessment is presented in Exhibits 5.5.5, 5.5.6 and 5.5.7 of the EA. The MTO concluded that an extension of Highway 407 to Highway 7 east of Brock Road was preferred for the following reasons:

- *Terminating Highway 407 at Markham Road (i.e. Do Nothing) is not a desirable option because it does not address the significant traffic problems that will be experienced in the Town of Markham and communities east of Markham Road with the opening of Highway 407;*
- *There is a general desire to extend Highway 407 to the east of Brougham and as soon as possible - this has been identified by the public and provincial and municipal politicians;*
- *Although this option advances the impacts to the natural and cultural environment and agricultural lands, it reduces projected traffic volumes on Markham Road and within the villages of Green River, Whitevale and Brougham, without significantly increasing the traffic volumes through other communities. The other options did not result in reduced traffic volumes in all these communities.*
- *The option is acceptable to the Town of Markham and the Regional Municipality of York because it relieves the future traffic volumes in Green River, Whitevale and Brougham, and supports economic development in the Durham Region.*
- *There is also general public support for this option because it will reduce traffic volumes in the communities along the route.*

2.3.3 Assessment



The MOE concludes that the MTO adequately assessed both “alternatives to” and “alternative methods” with respect to the problems identified in the EA, in keeping with the provisions of the EAA (R.S.O. 1990).

The selection of a new road/transitway as the preferred planning alternative is supportable as documented in the EA. The MTO was able to demonstrate through its evaluation process that the alternatives to the undertaking failed to meet the objectives set out by the Ministry for dealing with the transportation problems

identified in Section 2.1 of this Review or resulted in impacts which could not be adequately mitigated. The EA contained sufficient information to understand the decisions made by the MTO in reaching the conclusion that an extension of Highway 407 from Markham Road to Highway 7 east of Brock Road was the preferred alternative. The rationale to include a transitway is also reasonable given the need to protect for long-term transportation facility requirements. Several submissions however, did question when or if a transit facility would be implemented, or suggested that design of such a facility should be undertaken at the same time as detailed design of the road. The EA indicates only that the implementation of a transit system will be based on future demand.

Government agencies and municipalities generally supported the new road/transitway alternative or made no comment. A number of public submissions did question the selection of a new highway however, expressing concern that the other alternatives had not been adequately evaluated or identified, and that the continued construction of new highways was not an answer to the traffic problems being experienced in the Greater Toronto Area. The MTO has demonstrated through their evaluation of planning alternatives, that no other option will address the problems with respect to the termination of Highway 407 at Markham Road (Highway 48) in Pickering. The Ministry has also demonstrated that the development of additional public transit will not, in itself, adequately address the existing transportation problems. The provision of a transit system at some future date, as provided for by the transitway corridor, may however, provide a viable alternative to additional new highways in the future.

The route planning phase and the methodology used to determine the Technically Preferred Route are well documented in the EA. The selection of the preferred route followed a process that attempted to locate a transportation corridor that minimizes environmental effects. The comparisons of alternative routes was well documented and comprehensive, with evaluation criteria that accounted for all components of the environment as required by the EAA. Throughout the evaluation of alternatives, there was a consistent effort by the MTO to provide opportunities to the public and government agencies to have input into the selection process.

The MTO considered the “do nothing” alternative in keeping with the policy of the Ministry of the Environment (MOE) and also reviewed alternatives, evaluation criteria and evaluation methodology with government agencies and the public, also in keeping with MOE policy. The MTO adequately defined all evaluation criteria and provided a rationale for the use of the criteria in the evaluation process.

2.4 Environmental Effects of the Undertaking

As part of their submission, the MTO undertook to identify the potential impacts of the proposed undertaking on the local environment. This included detailed studies of the fisheries and terrestrial resources (Exhibit 6.4.1 and Appendices 19 and 20 of the EA) and consultation with the public and federal, provincial and municipal agencies (Appendices 16, 17 and 18 of the EA). Potential environmental effects of the Technically Preferred Alternative were initially identified through the evaluation of each alternative segment as discussed in Chapter 5 of the EA. The results of this evaluation, which included the identification of potential environmental effects, are presented in Appendices 9 to 15 of the EA, as previously mentioned in this Review.

Chapter 6 of the EA provides a more specific description of the potential environmental effects of the proposed undertaking and resultant effects associated with the construction, operation and maintenance of the project, and the future work to be undertaken during the design phase to address environmentally significant areas and concerns. Table 6.6.1 of the EA provides a summary of concerns, potential effects, proposed mitigation measures and commitments to future work.

It should be noted here, that if/when approval is received to proceed with the undertaking the MTO will initiate the design phase of the project. This phase will include more detailed technical work and further consultation with all stakeholders. Section 3.2 of this Review summarizes the comments of the various stakeholders (eg. government agencies, municipalities and the public) with respect to the proposed undertaking. Additional consultation will follow the Stakeholder Consultation Process discussed in Section 6.3 and Appendix 21 of the EA. With respect to future action by the MTO to continue to identify and address environmental issues, the Ministry states in the EA that:

“The proponent (the MTO) is committed to addressing the environmental concerns resulting from this undertaking whether identified in the Environmental Assessment Report or during the design phase prior to construction. All component projects of this undertaking will be screened during their design for new concerns and appropriate mitigating measures will be developed in consultation with appropriate stakeholders.”

The MTO further states that it:

“... recognizes the sensitivities associated with the crossing of the major and minor watercourses in the study area, the need to minimize impacts to ecological systems, the need to mitigate impacts to heritage resources, and

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the need to mitigate noise impacts. Therefore, the MTO is committed to involving affected stakeholders in the design process to ensure that the Highway/Transitway is designed and constructed in a way that is responsive to these stakeholders' interests."

The MTO has recognized that during the design phase there is the possibility that significant environmental impacts may be identified that were not anticipated in the EA. The Ministry has indicated in the EA that these impacts may fall into either of two categories. The first category would include changes to the proposed undertaking which are required because of new information resulting from design engineering and environmental investigations. The second category would include short term impacts which result from construction staging of the undertaking. According to the MTO staging of construction is dependent upon financial resources, provincial priorities, and realized growth in demand, and can only be determined during the design phase.

In the event that conditions do occur that result in a proposed change to the undertaking, the MTO has committed to discussing such changes with the affected stakeholders and the Ministry of Environment. MTO has proposed that if no agreement can be reached, the proposed change will be addressed under a Class EA type process. This would require the preparation of an Environmental Study Report (ESR) and would also allow for the opportunity to request the Minister of Environment to "bump-up" the proposed project to an individual EA. Under this process, only the change under consideration and associated impacts would be subject to review. Section 4 of this review, proposes a draft condition of approval to address this particular proposal by the MTO.

Section 6.4 of the EA provides a description of the significant effects of the undertaking and sets out objectives for the design and construction phase to address the key environmental concerns raised during the study. The specific objectives for protecting the environment however, will be determined during the design phase in consultation with the appropriate stakeholders. The MTO grouped environmental effects into four key categories - natural environment, social environment, cultural environment and economic environment. The following is a review of the environmental effects identified in each category and a brief overview of the commitments of the MTO with respect to addressing the impacts associated with these effects. Although significant portions of Section 6.4 of the EA have been summarized here for the convenience of the reader, reference should be made to the aforementioned sections of the EA for additional details. Section 4 of this Review contains a list of objectives/future commitments that the MTO has proposed to deal with the environmental impacts discussed in these four key categories.

2.4.1 Natural Environment

Fisheries

The undertaking crosses 3 major watercourses (Rouge River, Little Rouge Creek and West Duffins Creek), and 25 smaller tributaries. The fisheries in the 3 major watercourses are significant. Significant species of the Rouge River system include largemouth bass, coho and chinook salmon, and brown and rainbow trout. The vulnerable³ reddsides and the provincially rare central stoneroller have also been identified in the Rouge River. The Little Rouge Creek also contains the provincially rare central stoneroller, hornyhead chub and stonecat, while the West Duffins Creek also contains the nationally vulnerable reddsides. Migratory fisheries (ie. trout and salmon) exist in the Little Rouge Creek for which MTO has indicated that convenient upstream passage should be considered in later design stages. During the consultation phase, the Ministry of Natural Resources (MNR) requested that additional information be gathered to guide the design of the crossings and necessary mitigation measures. The federal Department of Fisheries and Oceans (DFO) also advised on the information required should an application under the Federal Fisheries Act become necessary. This information has now been made available to the MNR, DFO and the Metropolitan Toronto Region Conservation Authority (MTRCA) and will be used during the design of the crossings, and the development of mitigating measures.

Navigation

The crossing of the Rouge River will require authorization under the federal Navigable Waters Protection Act (NWPA) which will in turn trigger a screening under the Canadian Environmental Assessment Act (CEAA). The MTO has observed in the EA that prior to obtaining CEAA and NWPA approval for the Rouge River crossing, navigation and environmental concerns must be addressed.

Water Quality

The MTO has identified that the hydrogeological condition of the area is important to the environmental features and ecological functions of the area. One hundred and ten hectares of potential recharge area and three high and three moderately high upwelling and seepage areas are crossed by the undertaking. Although no aquifers are expected to be impacted, there are ten wells in the vicinity of the route that could be affected by construction activities. The federal Department of the Environment (DOE), the Ministry

³ As established by the Committee on the Status of Endangered Wildlife in Canada

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of the Environment (MOE), MNR, MTRCA and DFO expressed the need to manage highway drainage and erosion to minimize potential adverse quantity and quality impacts on soil, surface water and groundwater. Many of these same issues were again raised in agency comments following submission of the EA and are identified in Section 3 of this Review. To protect groundwater, aquatic and terrestrial resources the MTO has listed 13 separate objectives with respect to groundwater, stormwater management and, erosion and sedimentation to be applied at the design phase. These objectives are discussed in more detail in Section 6.4.1 of the EA.

The MTO has committed to providing bridges at six key crossings as result of more detailed field work. Bridges are proposed at the Rouge River, Little Rouge Creek, the West Duffins Creek, an unnamed tributary of the West Duffins Creek (Lot 3, Concession 5), Ufre Creek and an unnamed tributary of the Duffins Creek located east of Brougham (NE part of Lot 16, Concession 5) if a new crossing is required. In addition, bridges will be considered for other crossing locations where warranted to minimize aquatic and terrestrial impacts. The MTO has listed 17 objectives in Section 6.4.1 of the EA that will apply wherever water crossings are utilized.

Vegetation

The route has been selected to minimize impacts on woodlots and it is expected that further reductions in impacts can likely be achieved during the design phase. However, the proposed undertaking has the potential to impact upon 60 hectares of woodlands. The MTO has determined that with the exclusion of the stream valleys, for the most part the woodlands affected are not that significant. Several objectives with respect to minimizing impacts on woodlots are listed in Section 4 of this Review.

Wildlife and Corridors

Wildlife habitat and corridors are important to the long-term survival of wildlife populations. Natural corridors are defined as linear natural features such as streams, floodplains, steep slopes, valleys, contiguous narrow woodlands and wetlands, that connect larger woodland blocks. Within the study area, the more significant wildlife habitat and corridors are associated with the major north-south valleys (ie. Rouge River, Little Rouge Creek and West Duffins Creek). Intrusion into these areas can adversely affect wildlife habitat and movement. The MTO proposes to mitigate the barrier impacts of the Highway 407/Transitway corridor along the Rouge River, Little Rouge Creek, West Duffins Creek, Urfe Creek and two unnamed tributaries by the proposed bridge crossings. Other corridors will be reviewed at the time of design giving consideration to key principles that will be established jointly between the MTO and the MNR, prior to the

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commencement of design. When developing these principles, the MTO has indicated that consideration will be given to the following:

- *the size of corridor linkages*
- *the presence of an incised valley*
- *the contiguous value of terrestrial units and connectivity*
- *the size of valley vegetative units/systems*
- *habitat diversity*
- *connection and width of riparian vegetation*
- *existing wildlife species*
- *the distance between corridors*
- *Green Lands Strategies*
- *resilience of features*

Air Quality/Energy

The MTO has commissioned a research study to calibrate models for predicting and assessing local air quality impacts of transportation to Ontario's conditions. This study has not yet reached the stage where general conclusions applicable to the Highway 407 project, can be drawn. When the study is complete, the MTO will review with the MOE how the study findings can be used at the project level. If the results of these discussions are applicable to the Highway 407/Transitway project between Markham Road and Highway 7 east of Brock Road, then efforts will be made to incorporate the findings at that time.

The MTO indicates in the EA, that the extension of Highway 407 will reduce traffic volumes and congestion in the communities of Box Grove, Locust Hill, Whitevale and Brougham. Presumably this might result in some improvement in local air quality, and some energy efficiencies. The provision of a transitway will allow for a reduction in transportation-related energy consumption and air emissions, when implemented.

Spills

Several concerns were raised regarding the environmental implications of on-highway spills. Under Ontario's *Environmental Protection Act* (EPA), such spills are the responsibility of the owner of the spilled pollutant or the person having control of the pollutant at the time of the spill. The EA notes that the MTO will be responsible for the remediation of any spills resulting from its operations. As well, where feasible,

opportunities for providing ease of containment of accidental spills will be provided for as part of the design of stormwater management facilities.

Landfills and Soil Contamination

The proposed undertaking does not cross any known areas where waste materials have been landfilled. The proposed undertaking does however, cross the north-western most corner of the Brock Landfill property in the Town of Pickering. Only a portion of the site has ever been used for landfill purposes, and early in 1997, the owner of the site began removing material to another licensed landfill with the concurrence of the MOE. The MTO is presently reviewing with the MOE, whether or not any approvals under the EPA will be required.

Although significant waste deposition or soil contamination was not identified by the MTO, it is recognized by the Ministry that possible landfilled waste or contamination may be discovered during the design phase and/or property acquisition phase. The MTO has committed to manage any waste materials or contaminated soils encountered, in accordance with the requirements of any applicable legislation and guidelines.

2.4.2 Cultural Environment

The EA indicates that during the Route Planning phase of the study, archaeological sites and historical buildings were identified. The document further indicates that there is the potential that undiscovered archaeological sites may exist within right-of-way of the technically preferred route. To ensure that heritage resources are identified and protected, the MTO has undertaken additional field investigations to identify the specific nature and extent of archaeological resources impacted by the highway, and to develop appropriate mitigating measures. This is being done in accordance with the MTO/Ministry of Citizenship, Culture and Recreation (MCCR) "Protocol for Dealing with Archaeological Concerns on Ministry of Transportation Undertakings". The mitigation of impacts to all historical buildings adversely affected by this undertaking will be developed in consultation with the MCCR and the local heritage planners. Assessment work is currently underway, and any necessary mitigating measures will be implemented prior to construction, as will any necessary salvage work.

2.4.3 Social Environment

Community Impacts

The MTO mentions in the EA that the major landowners (eg. federal and provincial

governments) and municipalities in the study area have been involved with the study and have developed municipal and land use plans taking into account the Highway 407 technically preferred route. However, the proposed undertaking will displace 21 residences, and encroach upon 64 public and 10 private properties. Where possible, impacts on residences and private properties will be minimized during the design phase.

The MTO has determined that the undertaking will reduce traffic volumes and consequently, congestion, through Markham, Box Grove, Green River, Locust Hill, Whitevale and Brougham resulting in an improved quality of living in these communities. The undertaking may however, result in an increase in traffic volumes in Greenwood. According to the MTO, the Town of Pickering is investigating traffic calming methods and local road improvements to address existing/potential traffic concerns in Greenwood.

Recreation

The recreational amenities of the Seaton Hiking Trail and the Seaton Flying Club may be impacted by the crossing of West Duffins Creek. The MTO proposes to minimize the effects on the trail through the use of a bridge to cross the West Duffins Creek. The Seaton Flying Club and the Pickering Rod and Gun Club will be displaced in accordance with the terms of their respective leases.

Aesthetics

There will be visual exposure of the Highway 407 from residents along the right-of-way in the Town of Markham, and the Hamlet of Brougham. There will also be some exposure from Locust Hill and some residents along Highway 7, who will have a view of the proposed highway/transitway facility. Topography and vegetation in the hamlet of Green River will provide some visual screening of the facility, as viewed to the south. However, it will be visible at the easterly and westerly approaches to the hamlet. During the design phase, opportunities for addressing visual impacts will be considered by the MTO.

Noise

The mitigation of noise impacts is not anticipated to be a problem, since for the most part, the proposed right-of-way passes through undeveloped lands, and the owners of these lands were involved with the planning process. Mitigating measures may however, be required to address the noise impacts on homes adjacent to the right-of-way in the Town of Markham.

Several residences may experience noise level increases between 5 dB and 20 dB, with resultant noise levels greater than 55 dB if the proposed undertaking is implemented. A more detailed noise analysis will be undertaken by the MTO during the design phase, and where warranted, noise mitigation measures will be developed. According to the MTO, typical mitigating measures may include construction of berms and/or barriers, modification in the horizontal and vertical alignment of the highway facility, and/or the use of quieter pavements. The detailed noise study will be conducted in accordance with the Highway Noise Impact Assessment Methodology described in Appendix 23 of the EA. The results of the noise study will be submitted to the MOE for verification prior to construction. During the design phase site specific noise mitigating measures will be developed in consultation with the MOE. The specific objectives for the noise component of the design phase are listed in Section 3 of this Review.

2.4.4 Economic Environment

Development

The MTO has determined that the undertaking is not expected to have significant adverse effects on the economic environment of the area. The Ministry expects that the proposed extension of Highway 407 will support the planned growth envisaged in the York and Durham Official Plans and also support such initiatives as the Federal Airport Lands, and the Cornell and Seaton Community plans.

Agriculture

The undertaking will remove approximately 381.5 hectares of Class 1 and 2 farmland and 5.1 hectares of Class 3 and 4 farmland from production, representing a permanent loss of this resource. In addition 11 farm operations will be affected. The relocation of Highway 7 to accommodate the Durham-York Line (York Regional Road 30) interchange will also impact on an existing operation by severing its land base. Where possible, farm severances will be reduced during the design phase. The MTO notes that most of the land affected is in public ownership or within the boundary of the Seaton Community Planning area. The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has not raised any concerns with the transportation facility as proposed in the EA.

2.4.5 Assessment



The MTO has undertaken an assessment of the environmental effects of the proposed Highway 407/Transitway facility and identified possible mitigating measures in accordance with the requirements of the EAA. The Ministry has also outlined measures/objectives to deal with the further evaluation of environmental effects associated with the proposed undertaking. Some are to be undertaken to meet the requirements of government agencies, while others relate to concerns identified by local municipalities or the public.

The Ministry has clearly committed to continue to address environmental effects of the proposed facility during the design phase. This will be accomplished through further field investigations, and through the Stakeholder Consultation Process discussed in Section 6.3 and Appendix 21 of the EA. Field investigations and detailed design will be guided by the objectives identified in Section 6.4 of the EA and reproduced in Section 3.3 of this Review. Specific objectives for protecting the environment will be developed during the design phase, in consultation with the appropriate stakeholders.

Comments received following submission of the EA indicated that a number of government agencies, municipalities and members of the public continue to have concerns with the potential environmental effects of the proposed undertaking. However, the government agencies and municipalities have indicated that their concerns can be addressed during the design phase, through the Stakeholder Consultation Process. This process can also be used to address some, but not all, of the concerns raised by the public. A summary of agency and public comments, along with MTO's proposed changes to the Stakeholder Consultation Process to address some of these comments is found in Section 3 of this Review.

3.0 AGENCY AND PUBLIC CONSULTATION

3.1 Proponent's Consultation Activities

Consultation with potentially affected stakeholders is an integral part of the environmental assessment process. The Ministry of the Environment encourages all proponents to develop an effective consultation program early in the planning process to ensure that concerns identified in local communities can be addressed throughout the development of the undertaking. .

This section reviews the consultation that the MTO undertook with interested parties, members of the public and government agencies prior to making application under the EAA for the proposed Highway 407 / Transitway from Markham Road easterly to Highway 7 east of Brock Road. This consultation is often referred to as pre-submission consultation.

Although not a requirement of the EAA (R.S.O.1990), pre-submission consultation (PSC) was, and continues to be a fundamental component of the EA process. It is now a requirement of the amended EAA.

The MTO identified a number of objectives with respect to study organization that guided the public and agency (stakeholders) consultation process. These objectives are described in Section 1.5 of the EA and are listed below:

- *to ensure that stakeholders have the opportunity to be involved in the study;*
- *to identify issues and interests early enough in the planning process so that they can be effectively addressed;*
- *to allow the various interests within the Ministry of Transportation to participate effectively in the study; and*
- *to effectively draw on the skills and knowledge base of the broad community to facilitate decision-making;*
- *to properly quantify the problem/opportunities within the study area;*
- *to generate a reasonable range of alternatives for addressing the problem/opportunities; and*
- *to properly assess the potential impacts, evaluate the alternatives, and develop mitigating measures.*

The MTO's pre-submission consultation program generally included the following:

- *notification of study start-up, including a description of the study, and an outline of the study area;*
- *technical meetings and other contacts with municipalities, ministries and agencies, landowners, and special interest groups, as required; and*
- *Public Consultation Sessions and meetings with and/or presentations to municipalities and external ministries and agencies to present the progress of the study and to seek input.*

The MTO notes in the EA, that consultation with the review ministries and agencies, municipalities, elected representatives, landowners, special interest groups and the public assisted the project team in:

- *identifying relevant concerns of the various parties so that appropriate considerations could be given to these matters as decisions and commitments were made relative to the preferred planning solution or specific design proposals;*
- *identifying environmentally significant areas/issues;*
- *ensuring that all reasonable/feasible alignment alternatives were identified;*
- *ensuring that appropriate mitigating measures are identified and considered to minimize potential adverse effects; and*
- *ensuring that any commitments to future work are clearly outlined and documented.*

3.1.1 Consultation with the Public

The MTO encouraged the general public and special interest groups to participate in the study process through the project's organized consultation program. This program consisted of the following:

- *Newspaper notices (Ontario Government Notices);*
- *Production and distribution of Brochure No. 1 - Notice of Study Initiation/Data Collection in November 1989;*
- *Production and distribution of Brochure No. 2- Notice of Public Information Centres - Alternative Routes (May 1990);*
- *First series of Public Information Centres (Alternative Routes) held in May 1990;*

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- *Production and distribution of Brochure No. 3 - Notice of Public Information Centres - Presentation of Technically Preferred Route (May 1991);*
- *Second series of Public Information Centres (Technically Preferred Route) held in June 1991;*
- *Verbal and written responses to comments made at the information centres and to communications received throughout the course of the study; and*
- *Meetings with individuals or special interest groups as requested and deemed practical.*

MTO held public consultation sessions at key points throughout the planning and decision-making process to allow affected landowners, special interest groups and the general public to have the opportunity to participate in the study.

In 1990, the Ministry and/or its consultants held Public Information Centres for the Route Planning Phase of the study. Public notification of the information centres included advertisements placed in 15 local and regional newspapers two weeks prior to the first information centre, plus householder and direct mail distribution of approximately 22,400 information brochures. The Markham-Pickering-Whitby centres were conducted on a drop-in centre basis and attracted a total of 863 persons representing 750 households. In 1991, another series of information centres were held to introduce the Technically Preferred Alternative. A total of 22,600 information brochures were distributed throughout the study area announcing the centres. Notification was again by mail (general distribution and direct mail) and local and regional newspapers (16 in total). These information centres followed the same format as the those held in 1990 and attracted 456 persons representing 378 households. A summary of the comments received at these information centres and the actions taken by the proponent can be found in Appendix 18 of the EA.

MTO staff and/or the Ministry's consultants also held special preview sessions prior to each of the Public Information Centres to keep special interest groups informed of the study process and provide input specific to their concerns. The public was also able to obtain information concerning the project at a number of municipal council presentations.

In 1995 the MTO undertook a feasibility study to determine ways of addressing traffic concerns related to the potential opening of Highway 407 to Markham Road (Highway 48), in 1998. The analysis of the possible alternatives for addressing these concerns was reviewed with municipal staff and presented to municipal councils and the public during 14 separate council/committee meetings from February of 1996 to November of 1996. In addition, the MTO held Public Consultation Sessions to allow the public, special interest

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groups and government review agencies, the opportunity to review and comment on the study findings. Four sessions were held in Markham and Pickering during April and November of 1996, with a total attendance of 588 persons. These sessions were advertised in three local papers and one regional paper, approximately one week in advance of being held. The April sessions were advertised through the distribution of approximately 750 brochures to MPPs, MPs, municipal clerks, review agencies, interest groups, property owners and those on mailing lists from the earlier route planning study. In addition, 3,500 brochures were delivered to area residents by postman. Notification for the November sessions followed the same process, with a similar number of brochures being distributed. A summary of the sessions held by MTO and/or its consultants for the feasibility study can be found in Appendix 18 of the EA.

The MTO states in the EA that *"In summary, the general public identified major concerns about the traffic impacts on the Town of Markham resulting from the termination of Highway 407 at Markham Road, strong support for extending Highway 407 easterly, and concern for protection of the valley systems being crossed by the highway/transitway."*

3.1.2 Consultation with Government Agencies

The Ministry of the Environment strongly encourages proponents to contact key ministries and local government agencies in the early stages of planning to ensure that their concerns and comments can be taken into consideration. The MTO formally contacted federal and provincial government agencies and municipal planning and public works departments at key points in the study. Working meetings and written correspondence were also an important aspect of continued communications with those agencies with an interest in the proposed undertaking.

During the Route Planning Phase of the study, government agency presentations were held in conjunction with the May 1990 and June 1991 Public Information Centres, mentioned in the preceding section. In addition, federal, provincial and municipal government representatives were consulted regarding:

- *The April 1990 - Initial Data Collection, proposed Route Alternatives and proposed Evaluation Criteria;*
- *The July 1990 - proposed Route Alternative Modifications as a result of ministry/agency, municipal and public input received during the spring and early summer of 1990;*
- *The August 1991 - Technically Preferred Route; and*

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- *The September 1992 - proposed minor alignment shift in the Town of Markham (Link S3S).*

The technical teams for the Region of York and Region of Durham met and reviewed presentations from the MTO in a series of meetings beginning in June 1989 and ending in May 1991. These meetings addressed initial route alternatives, final route alternatives and the technically preferred route. Elected municipal officials were kept informed of the status of the project through presentations to municipal councils, while federal and provincial elected officials were contacted at key points in the study coinciding with the Public Information Centres.

The Feasibility Study phase was introduced to government agencies at an introductory meeting held in January of 1996. The agencies involved were essentially the same as those involved during the Route Planning Phase of the study. Follow-up correspondence and meetings were held with government agencies to address specific issues. According to MTO, *"no concerns were raised about the study process nor the range of alternatives being considered"* by any of the government agencies. However, as a result of the special interest in the valley systems, and in particular, the potential effects in the Rouge watershed, a special presentation was made to the Rouge Park Alliance consisting of representatives from the Metro Toronto Region Conservation Authority; the Ministry of Municipal Affairs and Housing; the Municipalities of Metropolitan Toronto, Markham, Scarborough, Pickering, Richmond Hill, Whitchurch-Stouffville, the Metro Zoo and Save the Rouge Valley Systems Inc. The presentation provided the Alliance with background information on the project, alternatives under consideration, and the process for determining the preferred alternative.

Municipal staff from all effected municipalities were kept informed through ongoing contact and meetings starting in February of 1996 and ending in October of 1996. As indicated in the previous section, the analysis of alternatives was reviewed with municipal staff and presented to municipal councils and the public at 14 separate council/committee meetings between February 1996 and November 1996.

Appendix 16 of the EA provides a summary of input/comments received from federal and provincial agencies during the course of the study. Appendix 17 of the EA includes selected correspondence from federal, provincial and municipal agencies.

The MTO's pre-submission consultation process also involved the preparation of a Draft Environmental Assessment that was provided to federal and provincial review agencies, the Metro Toronto Region Conservation Authority and the Rouge Park Alliance for comments. The Ministry held meetings and/or telephone conversations for clarification

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purposes following receipt of the comments, which were then taken into consideration in the preparation of the final EA. Appendix 24 of the EA includes the specific comments and describes how they were addressed by the MTO.

In summary, the EA concludes that *“the pre-submission consultation process resulted in general acceptance of the technically preferred route established through the Route Planning Study, and support for the partial extension of the Highway 407/Transitway to Highway 7 east of Brock Road.”* The MTO further states that, *“there was however, strong representation made by the agencies, special interest groups and the public to protect the valued ecological systems within the study area.”* Both the Rouge Park Alliance and the MNR requested that a process be developed for involving stakeholders during the design and construction phase of the project. The MTO responded by proposing a Stakeholder Consultation Process, which was developed jointly with stakeholders and is described in more detail in Chapter 6 of the EA.

3.3.3 Assessment



The MTO's agency and public consultation program was comprehensive and well documented. The Ministry undertook an extensive and well-planned, multi-staged consultation program which provided members of the public and government agencies with a variety of opportunities to participate in the EA process. The information provided in the EA demonstrates that the Ministry considered the results of the consultation program in the decisions that resulted in the identification of the preferred alternative.

Several submissions received by the Ministry following submission of the EA were critical of the consultation program indicating that not all persons impacted by the project were aware that it was proceeding. The MOE considers the efforts of the MTO to consult, seek input and disseminate information in keeping with the principles of pre-submission consultation. The information provided in the EA and summarized in the preceding Section demonstrates that considerable effort was made to contact all persons potentially impacted by the proposed project.

In addition to its pre-submission consultation efforts, the MTO has agreed to continue the consultation process if/when it receives approval for the project through the Stakeholder Consultation Process (SCP). This process will involve affected stakeholders in the design process to ensure that the Highway/Transitway is designed and constructed in a way that is responsive to the interests of stakeholders. The MTO states in the EA

that “*since the design has not commenced, there is ample opportunity for meaningful stakeholder input*”. The Ministry’s commitments to the SCP are discussed in Chapter 6 of the EA, and indicate that “*the specific objectives for protecting the environment will be determined during the design phase in consultation with external agencies and municipalities*.” The Ministry further states that consultation will include all affected federal and provincial agencies, municipal staff and elected officials and the public.

3.2 Post-Submission Agency and Public Comments

In April of 1997, the MTO published a Notice of Submission of the EA in nine local and regional newspapers and distributed copies of the EA to all municipalities effected by the proposal. Provincial and federal agencies who had indicated an interest in the project were also sent copies of the EA for review. This section of the Review summarizes the comments received following publication of the Notice of Submission of the EA, and the MTO’s response to those comments.

3.2.1 Government Agencies

When a proponent submits an EA to the Minister of the Environment, Ministry staff circulate the document to the Review Team. This Team consists of government agencies at the local, provincial and federal levels.

The Review Team reviews a proponent’s documentation and makes comments based on the following criteria:

- the technical quality and completeness of the EA, including whether the data, analysis and conclusions are valid, and whether the level of detail of the information is satisfactory; and
- how well the EA addresses the policy interests of each review team member.

The Team’s comments are submitted to the Environmental Assessment Branch and are considered in the “Conclusions/Recommendations” section of this Review (Section 4).

Table One is a list of those agencies that were circulated a copy of the EA, whether or not

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they made a submission to the MOE and a general comment concerning how their concerns, if any, can be addressed. Table Two lists agency comments according to the identified environmental effects of the proposed undertaking. These Tables are provided for ease of reference only and are **not** intended to present a comprehensive summary of each agency's position with respect to the proposed project. A detailed summary of the comments received from each agency, including complete copies of each agency's submission(s) can be found in Appendix Three of this Review.

None of the agencies circulated were opposed to the MTO's proposal to extend Highway 407 from Markham Road (Highway 48) to Highway 7 east of Brock Road, with the inclusion of a transitway corridor. However, a number of these agencies did indicate that their conclusions were based on the MTO addressing certain issues during the design phase of the project in accordance with the proposed Stakeholder Consultation process, and the results of further studies.

A number of federal agencies indicated that additional approvals may be required under federal legislation, including the Fisheries Act, the Navigable Waters Protection Act and the Canadian Environmental Assessment Act. The MTO has recognized these additional requirements in the EA, and has committed to acquiring all necessary federal permits, licences and other approvals prior to construction.

The Ministry of Agriculture, Food, and Rural Affairs indicated that it was satisfied with the EA as submitted, while the Ministry of Natural Resources stated that it had no concerns provided consideration was given to final comments. The Ministry of Natural Resources also endorsed the concept of the Stakeholder Consultation Process, and indicated that the Ministry's concerns could be addressed through this process, including matters related to groundwater, access and service roads, wildlife corridors and habitat, fisheries, designated recreational trails and other potential highway impacts. The Ministry of Environment identified certain requirements concerning future noise and vibration studies, that will need to be considered during the design phase of the project and indicated that these could be addressed through conditions on the approval of the undertaking. The Ministry also mentioned in its submission, that the proponent's recognition that ecosystem principles should be considered when assessing impacts and evaluating alternative routes was acceptable and encouraged the MTO to incorporate these principles and linkages in future EA submissions.

The submission of the Metropolitan Region Conservation Authority/Rouge Park Alliance indicated that these two agencies support the proposed alignment for the Highway 407 / Transitway. However, a number of issues were identified that both agencies have agreed

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Table 1

Agencies Circulated Copy of EA for Comment			
Review Agency	Sub- mission	Concerns	Method(s) to Address Comment(s)
Ministry of the Environment	yes	yes	Stakeholder Consultation Process and conditions on approval.
Ministry of Natural Resources	yes	yes	Stakeholder Consultation Process.
Ministry of Agriculture, Food and Rural Affairs	yes	no	
Ministry of Citizenship, Culture and Tourism	no		
Ontario Realty Corporation	no		
Metro. Toronto Region Conservation Authority	yes	yes	Stakeholder Consultation Process primarily.
Rouge Park Alliance	yes	yes	Stakeholder Consultation Process.
Seaton Interim Planning Team	no		
Canadian Environmental Assessment Act			Consulting with appropriate federal departments as necessary.
Department of Fisheries and Oceans	yes	yes	Stakeholder Consultation Process, Fisheries Act (federal), Canadian Environmental Assessment Act.
Canadian Coast Guard	yes	yes	Navigable Waters Protection Act (federal), Canadian Environmental Assessment Act
Department of Transport	yes	yes	Stakeholder Consultation Process, plus additional federal approvals.
Town of Markham	no		

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Table 1 (continued)

Agencies Circulated Copy of EA for Comment			
Review Agency	Sub- mission	Concerns	Method(s) to Address Comment(s)
Town of Whitby	yes	yes	Stakeholder Consultation Process for some concerns, Regional planning process for others.
City of Oshawa	no		
Municipality of Clarington	yes	no	
Durham Region	yes	yes	Stakeholder Consultation Process for some concerns; others beyond mandate of EA.
York Region	yes	no	

can be dealt with during the design phase of the project. These include concerns related ongoing planning initiatives, fisheries and wildlife impacts, stormwater management and watercourse crossings. In addition, the Authority/Alliance has suggested that the design of the transit facility be undertaken in combination with the highway design and that changes to the Stakeholder Consultation Process be made to allow for the examination of environmental issues and potential mitigating measures related to both facilities. The Authority/Alliance also identified a need for a commitment, by the MTO, to full time site monitoring at specific sites as defined through the Stakeholder Consultation Process.

The Regional Municipality of Durham has requested that the Ministry of Transportation consider a by-pass of the community of Green River as part of the proposal, and also reactivate the EA study for the remainder of the Highway 407 east extension through Durham Region. The Town of Whitby has raised concerns with potential interim traffic impacts east of Highway 407's proposed terminus just east of Brock Road. The Town would also like the MTO to undertake a transportation impact and solutions study to review improvements to the existing arterial grid and interim improvements. However, both the Region and the Town have indicated support for the proposal and continuation of the highway beyond the section of highway proposed in the environmental assessment. The Town of Pickering supports, in principle, the proposed Highway 407/Transitway, on the understanding that the MTO will adequately address certain issues during the design

Table 2

Summary of Review Team Comments by Environmental Issues	
Category	Comments
Natural and Agricultural	• In order to minimize negative impacts on migratory bird habitat, we expect a firm commitment by the proponent to use native species to the maximum extent possible. We recommend the planting of several small demonstration plots of native grasses and forbs in areas of low erosion potential. • It is important that the topsoil remains on site to preserve the seed bank, and provide adequate nutrients for the native species used in rehabilitation. • Environment Canada wishes to be involved in the development of planting programs to encourage habitat/corridor functions at watercourse crossings. They also wish to review the rehabilitation plans at a later stage, to ensure that practical wildlife habitat enhancements have been incorporated to the greatest extent possible. • Several watercourse crossings are proposed, yet the details have not been developed. It is not known whether the construction methods or the structures proposed will impact fish and fish habitat. • No in-water work/ activity shall occur during spawning, nursery or migratory periods for local fish populations. Some flexibility in timing restrictions may be possible, but would be made on a site by site basis. Formal requests for variance on timing restrictions would have to be made to the OMNR for the approval or concurrence. • All activities, including maintenance procedures, must be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the watercourse. Vehicular refueling and maintenance must be conducted away from the watercourse and its banks. • Stormwater management facilities should be off-line of the watercourse and should deal with water quality and quantity, including temperature and sedimentation. • The proponent must clearly demonstrate where the direct discharge of bridge runoff to a watercourse would occur and why prescribed stormwater management plans cannot be employed. • The Design Phase will detail environmental matters, design criteria for crossing, mitigation measures, Stormwater Management Plan, Monitoring Plan and Erosion Control Plan. Ongoing consultation with stakeholders will be held to ensure that environmental concerns are properly addressed. • There is updated hydrogeology information available in existing watershed and subwatershed plans in the area that should be considered in the design process and for water quality and quantity issues.

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Natural and Agricultural (continued)	• During the design phase, the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit station, the maintenance/storage yards and the commuter parking lots shall be decided on in consultation with the Noise Assessment Unit of the MOE. • Additional information and commitments are required regarding: groundwater, access and service roads, maintaining permanent riparian separations between eastbound and westbound lanes to accommodate wildlife passage at stream crossings, establishment of priorities for monitoring highway impacts, guarantees for trails in areas as designated by planning authorities. • Monitoring should take into account present day monitoring programs of MOE and MNR for groundwater, contaminants, invertebrates and fisheries. It should also take into account activities of facility construction and staging of construction. • Landscape features at Concession 5 are suitable for conveying wildlife, therefore a structure designed to move wildlife under the Highway 407 would be appropriate at one of the AL1400 and AL1420 locations.
Transportation and Engineering	• The highway must be designed to leave a permanent light window between highway bridge structures. • With the exception of bridges already indicated by MTO, all other crossings shall have structure design selection at crossings determined during the SCP. • The construction of the transitway is defined in a separate corridor adjacent to Highway 407: the Authority believes that design of this facility should be undertaken in combination with the highway design to address both technical environmental and economic issues. • The EA does not address the interim traffic impacts east of Highway 407's proposed Pickering terminus on the arterial road grid into Whitby. • Encourage the initiation of a transportation impact and solutions study to review improvements to the existing arterial grid and interim improvements including: improvements to Highway 7 east of the interim Highway 407 Pickering terminus including a by-pass around Brooklin, securing Lakeridge Road between Highway 401 and Highway 407 as a high speed arterial link and to the construction of an interchange at Lakeridge Road and Highway 401 to provide better connectivity to Highway 407 and to relieve urban streets from through traffic.
Social and Cultural	• Impacts of the transitway adjacent to the Highway 407 cannot be fully realized until design are completed. These issues should be included in the Stakeholder Consultation Process. • Two ongoing planning initiatives should also be recognized within the document and during the design stage: the Rouge Park North Plan and the proposed land use study of the Provincial Agricultural Preserve Lands.

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Administrative	• Approval of bridge section (5 11) of the NWPA requires CEAA review. • The proposed highway will cross CP Rail's Havelock Subdivision, yet there is no application for that crossing or any details of the crossing in the EA Report. • The sections of the Design and Construction reports dealing with noise and vibration shall be submitted to the Director of the Approvals Branch a minimum of 90 days prior to construction. • The MTO is requested to reactivate the EA study for the remainder of the Highway 407 east extension through Durham Region.
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phase of the project. These issues relate to the protection of two interchanges for Seaton, ensuring that certain roads are not dead ended, the provision of appropriate intersections at specific locations, and the realignment of Highway 7 around the hamlets of Green River and Brougham. All other municipalities circulated the EA, either made no comment or supported the proposal, and indicated their concerns, if any, could be addressed during design phase of the project.

3.2.2 Public Comments

Eighteen submissions were received from the public during and following completion of the government/public review period. These included a petition of 21 signatures, and submissions from several interest groups, including the Duffin-Rouge Agricultural Community, Friends of Second Marsh and Friends of the Farewell. All submissions received have been included in Appendix Four of this Review, regardless of when received.

Table Three presents a synopsis of the various issues identified in the above mentioned submissions, while Table Four provides a more detailed summary of these issues according to the potential environmental effects of the undertaking. These Tables are only presented here to provide the reader with an overview of the concerns raised in the submissions received from the public. They are **not** to be considered comprehensive or definitive. Appendix Four of the Review contains complete copies of all submission received from individuals and/or non-government organizations, along with a summary of each submission. These submissions are also kept on the Public Record File in the Environmental Assessment Branch of the MOE.

Many of the individuals and/or organizations who made submissions questioned the need to extend Highway 407 from Markham Road (Highway 48) to Highway 7 east of Brock Road. A number of submissions suggested that the environmental impacts of the

Table 3

Synopsis of Public Comments Received	
Issue	Comments
Project is not needed	- extension of highway is not effective transportation planning. - scarce financial resources should not be spent on the further extension of Highway 407. - proposed highway will promote urban sprawl and encourage use of private transportation. - proposed highway will have negative economic impacts on local businesses. - proposed highway will only cause further traffic problems.
Need to examine other alternatives to proposed project	- expansion of public transit and existing road system should be considered before any further highway expansion. - other alternatives, such as public transit, TDM (Transportation Demand Management), telecommuting, trip sharing and HOV (High Occupancy Vehicle) lanes should be given more consideration.
Environmental impacts of proposed project	- proposed highway will remove valuable farmland from production. - significant impacts on the watershed ecosystem will occur if the proposed highway is approved. - construction and operation of highway will have significant impacts on fisheries and wildlife habitat. - increased noise and air emissions will impact the quality of life in local communities.
Safety of the new highway	design of the new highway must address safety deficiencies identified with the existing Highway 407.
Insufficient time to review EA	EA was only available during business hours at all locations, and there were insufficient copies available. Review period should have been longer.
Financial concerns	who will pay for the new highway if the toll road approach does not provide sufficient financial support to pay for, and maintain the highway?

Table 4

Summary of Public Comments by Environmental Issues	
Category	Comments
Natural and Agricultural	• Concern for the watershed ecosystem of wetlands such as the increase of sediment levels, heavy metals, chloride and other toxic containment concentration; alteration of the soil and underground water condition; clearance of vegetation; and segregation of natural habitat areas that substantially would restrict the wildlife activities, limit the amount of vegetative food, and influence the viability of fish and aquatic invertebrates. • The highway development encourages the use of private autos which would generate green house gases threatening the desirable composition of atmosphere. The increase of surface water discharge from the highway to the Rouge River would heighten the water level of the river and its tributaries. The overall impacts of increased noise level, degraded air quality, and light pollution on the environment and endangered species may not yet be fully understood. Apart from the natural impact, the highway development also imposes an agricultural impact on the areas, wiping out 381.5 ha of Class I and 2 farmland. • The public should be informed of how mitigation measures will be used to minimize impacts on wildlife corridors, how large the highway traffic total estimated annual loading for effluents is, and what the highway's estimated salt and metal loading to surface and ground water within the Rouge River watershed is. • Sprawl should only be allowed to occur on the outskirts of the City of Toronto, not extending past the richest farmland. Farmlands should be maintained as local markets are growing and local food sources decreases transport needs. • The 407 structure in Courtice should be raised to minimize the natural impact. Drainage should be designed to prevent road salt and road spills from contaminating the water. Strict environmental approval process should be imposed to exert control over emission.

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Economic	• The 407 development is high cost with low benefit from infrastructure, exploits valuable farmland, generates higher taxes for subsidizing the escalating services and infrastructure maintenance costs, and incurs a loss to businesses along the roads now bypassed. • Millions of tax and charitable dollars have been spent to preserve the natural area. The management of scarce financial resources spent on the further extension of 407 is ineffective for comprehensive transportation planning. The 407 might not be able to nurture commercial development of the covered regions. The long-distance commuters consuming the community resources without financial contribution would eventually decay the urban development. • Legal and financial provisions should be planned for ensuring a self sufficient financial state if the 407 toll highway fails to pay for itself. A full cost accounting of the first year operation should be available. All provincial highways starting with the 400 series should be made fully self-financing toll roads. Highway and transit should compete on an even field. • A transportation system should be designed to meet the required movement of people and goods rather than cars and trucks. Energy conservation should be considered in designing an efficient transportation system in the face of future fuel shortages. The alternatives include buses and trucks that can later be adapted to hydrogen or solar power, or mass transit which has a greater potential for economic growth.
Transportation and Engineering	• The design of the 407 based on 1990-1991 statistics might overstate the traffic demand and discount the impact of telecommuting, trip sharing and high occupancy vehicle lanes. The other factors such as the 401 widening and the negative response from the trucking industry means a further reduction of traffic demand on the 407 • 407 might cause traffic problems on some roads connected with the highway and its induced economic development may eventually make people travel longer to meet their leisure needs in some farther recreational areas. • Recommend 407 safety measures such as crash protection should be implemented to correct past mistakes. • The Oshawa/Clarington link, like the 404 highway connection between 401 and 407 should be reconsidered. The contracted section of 407 beyond 404 should taper down to park and ride. • Reasonable incentives should be provided to encourage trip sharing.

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Social and Cultural	• The EA does not examine the potential increase of health costs, the degraded quality of life due to the corresponding environmental impact, and loss of productivity to be imposed on area municipalities and the provinces. • The development does not serve vulnerable groups such as senior citizens and those who don't own cars. The development will promote urban sprawl and discount the preservation of heritage homes. • Adequate drinking water should be provided to residents whose wells will be contaminated. • The effectiveness of public participation is questionable, since all these decisions are based on consultants' reports with many assumptions. The affected landowners do not even have rights for a hearing on the expropriation of their land. • A hearing should address social impacts such as losses to local business, and the cost of environmental impacts compared to using alternative transportation.
Administrative	• The EA is inaccessible and the public is not given sufficient time and information to respond to the issues. The EA documents do not offer any creative solutions nor does it seriously address alternatives. The correspondence between MTO and other government agencies shows the reluctance of MTO to acknowledge environmental issues and to commit to mitigation of negative effects on the environment. • Markham Town Council should not have this much influence on the decision making process of the Province of Ontario. • Suggest the public consultation period should be extended to Dec. 31, 1997 for the 407 East EA process.

proposed project would outweigh any benefits it might have, and cited the removal of prime agricultural land from production and the potential degradation or destruction of significant wetlands, wildlife habitat, and fisheries habitat as examples of such impacts. Other environmental concerns voiced, included reduced air quality, raised noise levels, and increased sedimentation of watercourses as a result of construction activities and stormwater runoff. A number of individuals/organizations also raised issue with the alternatives examined, and expressed a concern that public transit, local road improvements and TDM initiatives should be considered before the extension of Highway 407 east of Markham Road. Several submitters made comments with respect to the financial aspects of the proposed road, including whether or not such an expenditure could be justified in times of fiscal constraint, and questioned who would pay for the highway, if the toll road approach did not provide sufficient funds to construct and operate the new Highway 407/Transitway extension.

A number of these issues, such as those related to the environmental impacts of the proposed undertaking, can be addressed further during the design phase of the project, through Stakeholder Consultation Process that the MTO has discussed in the EA. A number of other issues have been addressed in the EA, while others are beyond the scope of the EA and this Review. Issues regarding the need for the project and the alternatives that can address the identified transportation problems have been discussed in the EA, while issues concerning the financial aspects of the undertaking can only be addressed by the MTO directly.

A discussion of the remaining issues can be found in Section 4.2 of the Review.

3.3 Proponent's Response to Agency and Public Comments

The MTO attempted to address the concerns raised through the pre-submission consultation process via a series of objectives/future commitments specific to each component of the environment and the concerns of various stakeholders. In addition, the Ministry agreed to a Stakeholder Consultation Process to be implemented following approval of the EA. This process is intended to provide a forum in which stakeholders can continue to have input into the design process to further identify the environmental impacts of the proposed undertaking, and possible mitigating measures. The Ministry has also proposed additional objectives and changes to the Stakeholder Consultation Process in response to the submissions received from the various agencies and the public.

The following is a list of objectives/future commitments identified in Section 6.4 of the EA and revised according to the MTO's response to the concerns raised in the agency and public submissions. A complete copy of the MTO's response to the MOE concerning agency and public comments is contained in Appendix Five of this Review.

Watercourse Crossings

- *Consult with MNR, MOE, MTRCA, and DFO during design.*
- *When designing and constructing facilities in the vicinity of lakes and watercourses, the proponent will have regard to the provisions of the Lakes and Rivers Improvement Act, and O. Reg. 158/90 under the Conservation Authorities Act.*
- *Design crossings so as not to impede fish movement.*

- *Design the Rouge River structure to avoid interfering with navigation.*
- *Avoid the placement of piers within the watercourse channel under the bank-full flow conditions (DELETED).*
- *Where possible, structural abutments and piers will be located outside of the regulatory flood plain to minimize obstruction to water flow. If it becomes necessary to construct abutments or piers within the floodplain, they will be designed to minimize any impact on flood conveyance or upstream flood elevations (NEW).*
- *Bridge and culvert openings will be designed for the 100 year and 50 year design storm criteria respectively, as per the MTO's "Design Flood Criteria" standards and policy (Directive B-100). Impacts of the regional storm will also be assessed, and appropriate mitigation measures developed in consultation with affected stakeholders (NEW).*
- *Environmental inspectors will be on-site during critical construction period (NEW).*
- *Minimize the placement of fill and abutments within the regulatory flood plain, and/or the meanderbelt or 100 year erosion limit of watercourses.*
- *Where practical, orient bridge piers in the direction of flow so as to maximize hydraulic efficiency during flood conditions.*
- *Where possible, design bridges to minimize/avoid alteration to the watercourse.*
- *Develop and implement erosion control plan before, during and after construction.*
- *Develop access roads for bridge construction and maintenance to minimize disruption to the natural systems and slope stability. Restore access roads that are not required for future structure maintenance. Stabilize access roads that will be required for future maintenance.*
- *Design crossings with consideration for wildlife and human passage.*
- *Conduct ongoing consultation with affected agencies during the design*

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and construction phases.

- *Where site conditions permit, maintain or re-establish riparian vegetation on both sides of watercourses.*
- *Conduct a drainage analysis and design the structures so as to minimize erosion and flood risk upstream and downstream of the structure.*
- *Where feasible, closed-bottom culverts will be used in upwelling areas*
- *Time any necessary in-stream construction to avoid critical fish migration and spawning periods, or construct in the dry. Any temporary realignments of watercourses to permit construction in the dry will be designed in consultations with MNR, MTRCA, RPA and DFO.*
- *In those situations where MNR determines that there will be harmful alteration of fish habitat, submit an Application for the Authorization for the Alteration of Fish Habitat (with supporting plans) to DFO. Develop the compensation plan and Application for Authorization in consultation with MNR, MTRCA, RPA and DFO.*
- *Control all construction activities in such a manner as to prevent the entry of petroleum products, rubble, concrete and other debris into the watercourse. Conduct all vehicular maintenance and refuelling activities away from watercourses and watercourse banks (NEW).*
- *Where feasible, instream construction will be carried out in the dry (NEW).*
- *Rehabilitation plans for construction sites will be developed in consultation with stakeholder agencies (NEW).*

Groundwater

- *At the design stage, contact will be made with external stakeholders to update information on groundwater resources.*
- *The designers and the contractor will be responsible for addressing quantity or quality impacts to shallow groundwater resulting from construction of the undertaking.*

- *Where dewatering operations are required, applicable Water Taking Permits and Certificates of Approval will be obtained.*
- *Any wells or septic systems removed from service as part of the undertaking will be properly abandoned/decommissioned.*

Stormwater Management

- *During the design phase, prepare a Stormwater Management Plan, dealing with both water quantity and quality, in accordance with MTO guidelines in consultation with MOE, MNR, MTRCA, DFO, DOE and the RPA.*
- *The proponent will strive to design stormwater management ponds to detain the minimum of a 2 hour 25mm storm event for 24 hours to address water quality and erosion concerns. Where agencies demonstrate a need, other detention times or additional quantity sizing requirements will be considered during the design phase in consultation with stakeholders.*
- *When designing BMPs, consideration will be given to measures for reducing adverse environmental impacts to surface and groundwater, including those related to temperature and salt.*
- *Bridge runoff should be discharged to stormwater management facilities (preferably a pond or swale) prior to discharge to watercourses where this reasonably can be achieved and will not cause unacceptable environmental, highway design, safety or operational problems.*
- *Where feasible, opportunities for providing ease of containment of accidental spills will be provided during the design of stormwater management facilities.*
- *Stormwater management facilities will be constructed off-line of watercourses (NEW).*

Erosion and Sedimentation

- *During the design phase, conduct an analysis of the erosion implications, and develop appropriate temporary and permanent erosion control*

strategies.

- *Consider the potential for destabilizing of banks due to groundwater and soils conditions, during the design phase and develop/implement mitigating strategies where required.*
- *Develop erosion control plans prior to construction. Erosion control techniques should include such measures as silt barriers, sediment ponds, flow check dams, natural buffers and sediment traps. Erosion control measures will be maintained until erodible areas have been stabilized.*
- *Bench slopes as necessary to reduce sheet erosion where such practices are deemed to be beneficial and will not cause additional unacceptable disturbance to vegetation, other natural areas of top of slope.*

Terrestrial Resources (Vegetation and Wildlife)

- *Where warranted, vegetation removals will be managed in consultation with MNR, MTRCA and RPA.*
- *During construction, protect vegetation that does not have to be removed.*
- *The proponent will utilize or provide reasonable opportunities for property owners and interest groups to salvage/transplant vegetation and seed sources.*
- *Where possible, develop planting programs in consultation with MNR, MTRCA, RPA and DOE to encourage habitat/corridor functions at watercourse crossings. Use native species where practical.*
- *When necessary, time tree removal to avoid significant nesting of migratory birds.*
- *Where practical and feasible, fill, top-dress and seed rip rap that could be hazardous to larger mammals.*

Noise

- *Identify noise and vibration sensitive areas.*

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

- *Establish operational noise impacts and, if sound levels exceed the applicable limits, develop and implement appropriate noise mitigating measures in consultation with MOE and in accordance with the MTO/MOE Noise Protocol.*
- *Identify and consider applicable municipal noise control by-laws. Where timing constraints, or any other municipal by-law may cause hardship to the proponent, an exemption from this requirement should be sought directly from the municipality in question.*
- *Minimize construction noise by ensuring that noise control devices on construction equipment are properly maintained.*
- *Consult with the Noise Assessment Unit of the MOE during the design phase to determine the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit stations, maintenance/storage yards and the commuter parking lots (NEW).*
- *The noise component of design and construction reports submitted for review and comment will include an assessment of operational noise impacts, measures to minimize noise and vibration, and the likely effectiveness of these measures (NEW).*

Cultural Environment

- *Field investigations are now underway to identify the specific nature and extent of archaeological resources impacted by the highway, and to develop appropriate mitigating measures. This is being done in accordance with the MTO/MCCR Protocol for Dealing with Archaeological Concerns on Ministry of Transportation Undertakings. Any necessary salvage work will be carried out prior to construction.*
- *The mitigation of impacts to all historical buildings adversely affected by this undertaking will be developed in consultation with MCCR and the local heritage planners. The assessment work is currently underway, and any necessary mitigating measures will be implemented prior to construction.*

EA Review: Highway 407 / Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)

Follow-Up

The following activities are proposed by the MTO to ensure that all environmental protection measures that have been committed to, are properly implemented during construction.

- *Develop construction/contract measures to ensure compliance with environmental protection commitments, and to ensure that clear responsibility for environmental inspection is assigned.*
- *Hold ongoing discussions with the contractors to address issues.*
- *Undertake audits to ensure that contract provisions are followed and that corrective actions are undertaken if necessary.*
- *During the design phase and as part of the Stakeholder Consultation Process, determine the need for post-construction monitoring (eg. stormwater, fisheries) in consultation with MNR, MOE, MTRCA, RPA, DOE and DFO. If a monitoring plan is needed, a plan will be prepared and implemented as appropriate.*

In addition to continued consultation with federal, provincial and municipal agencies with respect to identifying specific environmental objectives, the MTO has recognized that further consultation will be necessary with other directly affected stakeholders. The Ministry states in the EA that *“the need and opportunity for future meetings with individuals or groups (such as property owners) who will be directly affected by the preferred alternative has also been recognized and such meetings will occur during future design phases to supplement those held during the planning phase.”*

4.0 CONCLUSIONS / RECOMMENDATIONS

4.1 Proposed Conditions of Approval

The purpose of this section is to initiate the process of identifying any conditions that might be imposed should the Minister of Environment elect to approve the MTO's application under the EAA. It should be noted that these proposed conditions are for discussion purposes only, and are a compilation of standard conditions contained in most EAA approvals, future commitments/objectives identified in the EA document, and proposed conditions suggested by government reviewers and the public. As part of the public review period following publication of the Notice of Completion of Review, the MOE is inviting comments on these conditions, in addition to comments on the EA, the Review, the undertaking, and the proposal to apply certain provisions of the EAA as provided for under the *Environmental Assessment and Consultation Improvement Act, 1996*.

All comments should be submitted to the Environmental Assessment Branch, at the address identified on the inside front cover of this Review.

General Requirements

1. The proponent (the Ontario Ministry of Transportation) shall comply with all the provisions of the Environmental Assessment as submitted by the proponent which are hereby incorporated in the approval by reference, except as provided in these conditions and as provided in any other approvals or permits that may be issued.
2. These conditions do not prevent more restrictive conditions being imposed under other statutes.
3. Where a document is required for the public record, it shall be provided to the Director of the Environmental Assessment Branch for filing with the public record file maintained for the undertaking. In addition, copies of all such documents will be provided by the proponent for public access to the Director, Central Region, MOE; the Clerks of The Corporations of the Town of Pickering, Town of Whitby, The Regional Municipality of Durham and The Regional Municipality of York; and at least one local library in each of the aforementioned municipalities. Such documents will also be provided to other municipalities as considered appropriate by the proponent.
4. The proponent shall publish notice of the availability of any documents required for

EA Review: Highway 407 / Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)

the public record in local newspapers as determined appropriate through the Stakeholder Consultation Process.

Specific Requirements

5. The proponent's Design and Construction Reports are required for the Public Record. In addition, these reports will be made available, to all federal, provincial and municipal agencies that have indicated an interest in being involved in the detailed design phase of the undertaking. This includes, but is not limited to, the Department of the Environment, Department of Fisheries and Oceans, Department of Transport, the Ministry of Natural Resources, the Ministry of the Environment, the Ministry of Citizenship, Culture and Recreation, Metropolitan Toronto Region Conservation Authority, and the appropriate planning and/or public works departments of all affected municipalities.
6. The Ministry of Transportation will comply with the Ministry of Transportation / Ministry of the Environment Noise Protocol or other process agreed to by both parties prior to implementation of the design phase of the undertaking..
7. After the approval of the undertaking, unless otherwise advised by the Minister of the Environment, any change to this undertaking will follow the process set out in Section 6.5 of the environmental assessment for addressing new concerns (that is, those not identified in the environmental assessment). The proponent will follow the Provincial Highways Class Environmental Assessment process for significant new concerns. Where Class Environmental Assessment provisions are exercised, their application will be limited to new concerns and will not provide the opportunity to change the route location or the balance of design.
8. The MTO will abide by the objectives/future commitments identified in Section 6.4 of the EA and revised by letter from Paul Jankowski, Project Director, MTO to B. Johnston, Assistant Director, Environmental Assessment Branch, MOE, dated August 26, 1997.

4.2 Remaining Issues

A number of issues were raised during the review of the EA which remain unresolved. This section identifies those issues raised in submissions to the MOE that require further clarification, additional information or remain unresolved. Certain issues cannot be addressed in the context of this Review, while others can be dealt with during the design

phase of the project.

4.2.1 Government Agencies Issues

Though not opposed to the MTO application, government agencies did identify additional information requirements that must be addressed during the design phase of the project. The MTO has committed to involving all concerned agencies in the Stakeholder Consultation Process, and has listed a number of objectives/future commitments to address the concerns of these agencies (see Section 3.3 of this Review and Section 6.4 of the EA). An agreement as to an appropriate period of time for review of certain aspects of the Design and Construction reports will need to be addressed before the design phase of the project is undertaken.

Several municipal review agencies raised issues that cannot be addressed in this Review, since they are beyond the scope of the EA. These issues are primarily related to additional transportation initiatives that certain municipalities have indicated they would like the MTO to undertake in connection with the Highway 407/Transitway proposal. These issues should be taken up with the MTO directly

The Regional Municipality of Durham has requested that the Ministry of Transportation consider a by-pass of the community of Green River as part of the proposal, and also reactivate the EA study for the remainder of the Highway 407 east extension through Durham Region. The Town of Whitby has raised concerns with potential interim traffic impacts east of Highway 407's proposed terminus just east of Brock Road. The Town would also like the MTO to undertake a transportation impact and solutions study to review improvements to the existing arterial grid and interim improvements. However, both the Region and the Town have indicated support for the proposal and continuation of the highway beyond the section of highway proposed in the environmental assessment.

4.2.2 Public Issues

Submissions from members of the public and non-government organizations have indicated a number of concerns including, but not limited to, the need for the highway, the examination of alternatives, the environmental impacts of the proposed undertaking and the time made available for public review of the environmental assessment. Some of these issues can be addressed during the design phase of the project such as those specific to environmental impacts, while certain other issues are related more to government and/or ministry policy/direction with respect to transportation and are beyond the scope of the EA and this Review.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

The MTO has addressed the need for the highway/transitway in Chapter Two of the EA, and has also examined a reasonable range of alternatives, as discussed in Chapter 3 and Chapter 5 of the EA and Section 2.3 of this Review. The Ministry has noted that no one type of improvement will solve the problem, and that long-term transportation needs in the corridor will include road improvements, transit improvements and TDM improvements, along with the proposed undertaking identified in the EA.

4.3 Review Conclusions

As previously stated, it is not the purpose of this Review to decide whether the MTO's application should be approved under the EAA. That decision is made by the Minister of the Environment or, upon referral, the Environmental Assessment Board (EA Board). Instead, the Review assesses whether MTO has complied with subsection 5(3) of the EAA.

The Review presents an evaluation of the EA based on the following criteria:

- based on the review of the EA Branch, did the MTO address the provisions of subsection 5(3) of the EAA in identifying the Highway 407/Transitway as the preferred undertaking?
- based on the review of the Review Team, is the technical quality and level of detail of the documentation satisfactory?

With regard to the first criterion, the EA Branch concludes that the MTO undertook a process that addressed the provisions of subsection 5(3) of the EAA, including applicable policies and regulations. The document clearly lays out all the required information and provides the reader with the ability to cross-reference specific aspects of the document to previous planning documents and/or to the appendices. In terms of the second criterion, the Review Team is not opposed to the MTO's application. All technical issues raised by the various review agencies can be addressed through the Stakeholder Consultation Process proposed by the MTO, conditions on the approval of the undertaking, or via other relevant legislation (eg. Navigable Waters Protection Act, Fisheries Act, Canadian Environmental Assessment Act, etc.) . A number of other issues were identified that will require further discussion, but these concerns relate to issues beyond the scope of the EA and this Review, and must therefore, be addressed in another forum.

The Regional Municipality of Durham has requested that the Ministry of Transportation consider a by-pass of the community of Green River as part of the proposal, while the

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Town of Whitby has raised concerns with potential interim traffic impacts east of Highway 407's proposed terminus just east of Brock Road. However, both the Region and the Town have indicated support for the proposal and continuation of the highway beyond the section of highway proposed in the environmental assessment. Submissions from members of the public and non-government organizations have indicated a number of concerns including, but not limited to, the need for the highway, the examination of alternatives, and the environmental impacts of the proposed undertaking. Some of these issues can best be addressed during the design phase of the project through the Stakeholder Consultation Process. Certain other issues are related more to government policy/direction with respect to transportation and are beyond the scope of the EA and this Review.

Therefore, the MOE concludes that the MTO has adequately addressed the provisions of subsection 5(3) of the EAA, R.S.O. 1990. This conclusion, along with others rendered in the Review represent one of many pieces of information the Minister must now consider before making a decision pursuant to Section 9 of the amended EAA. As per Section 9, the Minister will make one of the following decisions:

- give approval to proceed with the undertaking;
- give approval to proceed subject to such conditions as the Minister considers necessary;
- refuse to give approval to proceed with the undertaking; or
- refer either part or the whole matter to the Environmental Assessment Board for a decision.

Prior to making a decision on the application, the Minister may appoint one or more persons to act as mediators to resolve such matters as may be identified as being in dispute or of concern with respect to the undertaking (subsection 8.(1), amended EAA).

APPENDICES

APPENDICES

EA Review: Highway 407 / Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)

Appendix One

Notice of Submission of Environmental Assessment

and

Letter of Submission

Appendix D

Notice of Submission of Student Response

and

Notice of Submission



Ministry
of
Transportation

Ministère
des
Transports

Ferguson Block, 3rd Floor
77 Wellesley St. West
Toronto, Ontario
M7A 1Z8

Édifice Ferguson, 3^e étage
77, rue Wellesley ouest
Toronto (Ontario)
M7A 1Z8

Office of the
Minister

Bureau du
ministre

(416) 327-9200

April 9, 1997

APR 14 1997

The Honourable Norm Sterling
Minister of Environment and Energy
12th Floor, 135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

58384

Dear Mr. Sterling:

The Ministry of Transportation is submitting an environmental assessment (EA) for Highway 407 and an adjacent Transitway, from Markham Road to Highway 7 east of Brock Road. The EA is submitted in accordance with the "transition" provisions of the amended Environmental Assessment Act. As such, this application is made in conformance with the requirements of the former Part II of the Act. In addition, in accordance with the transition provisions, I respectfully request the application of specific provisions of Part II of the newly-amended Act with respect to mediation and Section 12.2 activities permitted prior to EA approval.

The Ministry of Transportation has prepared a Notice of Submission (attached) and made arrangements to place this notice in the following newspapers: Toronto Star, Globe & Mail, Markham Economist and Sun, Ajax/Pickering News Advertiser, Scarborough Mirror, Oshawa/Whitby This Week, Clarington This Week, and L'Express. Copies of the EA have been distributed to those Government Review Agencies (distribution list attached) that have indicated a desire to be involved in the review of the formal EA. Copies of the EA have also been placed, for public review, in the Clerk's office of the local municipalities and the local and head offices of our two ministries. In addition, we have mailed the Notice of Submission to an extensive list of previously involved members of the public and interest groups.

As you are aware, the Ministry of Transportation has always placed the utmost importance on issues related to highway safety. As such, the MTO recently commissioned the Highway 407 Safety Review, with the resulting final report due to be released shortly. Furthermore, the MTO has already committed to addressing any and all legitimate safety

...2

concerns as may be identified through the Safety Review Report, prior to the opening of the Highway 407 Central section. This same commitment to safety also applies to the Highway 407 project for which EA approval is now being sought.

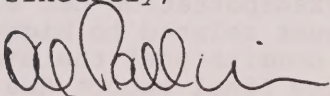
The conceptual plans developed for the Highway 407 easterly extension through the Ministry's EA work, will undergo further rigorous preliminary and detail design processes prior to implementation. As such, the current plans are very flexible as to the specific details related to ramp geometrics and other design/safety elements. These detailed design issues will be worked out subsequent to your approval of the EA submission, should you deem such approval to be appropriate. The design processes will also include further public consultation as outlined in the EA submission. Please be assured that there is the appropriate scope and flexibility to incorporate any potential changes that may be the result of the current Highway 407 Safety Review exercise.

In light of the ability to implement all required safety measures through subsequent design and construction phases, the Ministry of Transportation is submitting the EA now in order to deal with issues related to Highway 407 in the vicinity of Markham and points east in a timely manner. I hereby request approval pursuant to the Environmental Assessment Act for this undertaking, including:

- Designation of the plan for the undertaking;
- Refinement of the alignment and property requirements during the design phase of the undertaking;
- Acquisition of property required for implementation of the undertaking; and
- Design, construction, operation and maintenance of the undertaking..

I trust that this information will be sufficient to proceed with the review and approval of this undertaking.

Sincerely,



Al Palladini
Minister

AN INVITATION TO COMMENT ON THE ENVIRONMENTAL AGREEMENT FOR THE PROPOSED HIGHWAY 407 / TRANSFERRY FROM MARKHAM ROAD EASTWARD TO MIDWAY 7 EAST OF WOOD ROAD

THE ENVIRONMENTAL AGREEMENT ACT SUBSECTION 3.3 NOTICE OF SUBMISSION

cc: Hon. David Tsubouchi, MPP, Markham
Hon. Janet Ecker, MPP Durham West
Mr. Jim Flaherty, MPP Durham Centre
Mr. John O'Toole, MPP Durham East
Mr. Jerry Ouellette, MPP Oshawa
Mr. C. Pautler, MOEE

The Ministry of the Environment (MOE) is currently reviewing the Environmental Agreement (EA) for a proposed extension of Highway 407 / Transferry from Markham Road eastward to Midway 7 east of Wood Road. The EA is a key component of the Highway 407 / Transferry project and is being reviewed in light of the Environmental Agreement Act (EA Act) and the Environmental Assessment Act (EEA Act). The EA Act requires that the EA be reviewed and approved by the Minister of the Environment before it can be implemented. The EEA Act requires that the EA be reviewed and approved by the Minister of the Environment before it can be implemented. The EA Act and the EEA Act are the primary legislation governing the EA process. The EA Act and the EEA Act are the primary legislation governing the EA process. The EA Act and the EEA Act are the primary legislation governing the EA process.



The EA has been submitted in accordance with a written agreement entered into with a condition to the EA Act, which came into force on January 1, 1997. Under subsections 3.3(1) and 3.3(2) of the EA Act, certain provisions of the Act and the new Part 6 of the EA Act will apply to the environmental assessment.

Under these new provisions there will be no opportunity, after the Minister of the Environment has approved the EA, to make submissions and require a hearing. MOE is responsible to ensure the EA process is fair and that the EA is approved in accordance with the EA Act and the EEA Act. MOE will provide information to the public regarding the EA process and the EA Act and the EEA Act.

MOE will, in the proposed EA, submit the EA to the Minister of the Environment for approval. The EA will be submitted to the Minister of the Environment for approval. The EA will be submitted to the Minister of the Environment for approval.

You have the right to submit comments on the EA, the EA Act, the EEA Act, and the EA process. You can submit comments to the Minister of the Environment. You can submit comments to the Minister of the Environment.

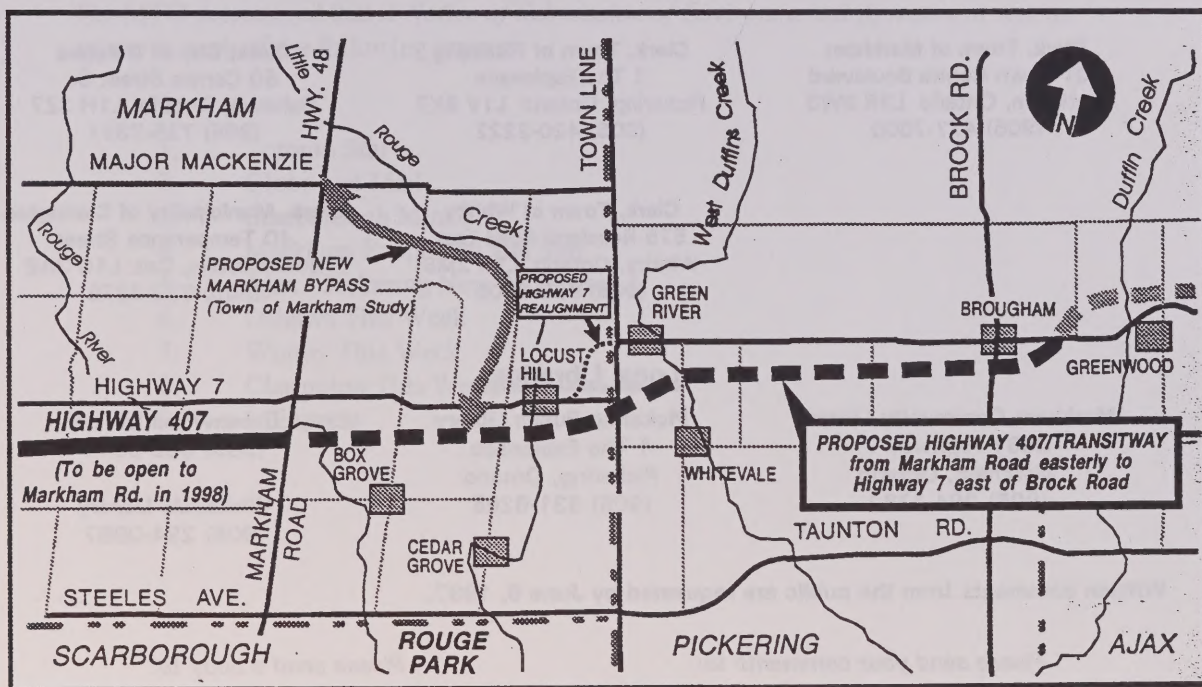
Notice of the submission of the EA Report will be published in the Ontario Gazette. The EA Report will be published in the Ontario Gazette. The EA Report will be published in the Ontario Gazette.

THE NEW YORK PUBLIC LIBRARY
ASTOR LENOX TILDEN FOUNDATION
155 E. 42ND STREET
NEW YORK 17, N. Y.

**AN INVITATION TO COMMENT ON THE ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED HIGHWAY 407 / TRANSITWAY
FROM MARKHAM ROAD EASTERLY TO HIGHWAY 7 EAST OF BROCK ROAD**

**THE ENVIRONMENTAL ASSESSMENT ACT SUBSECTION 6.3
NOTICE OF SUBMISSION**

The Ministry of Transportation [the proponent] has submitted an Environmental Assessment (EA) for a proposed extension of Highway 407 / Transitway from Markham Road easterly to Highway 7 east of Brock Road (see key plan) to the Ministry of Environment and Energy (MOEE). Approval under the Environmental Assessment Act (EA Act) is being sought for an ultimate basic 10 lane freeway to be constructed in stages corresponding to existing / future traffic demands. In addition, approval is being sought for the future implementation of a transitway in a separate corridor adjacent to Highway 407.



This EA has been submitted in accordance with a transitional process implemented with amendments to the EA Act which came into force on January 1, 1997. Under subsections 12.4(2) and 12.4(3) of the EA Act, certain provisions of the former and the new Part II of the Act will apply to this environmental assessment.

Under these new provisions there will be one opportunity, after the Notice of Completion of Review is published, to make submissions and request a hearing. MOEE is also proposing to apply the new provision which would allow a hearing to be requested either on the whole environmental assessment or only on particular matters of concern. MOEE will consider requests to refer matters to mediation as appropriate.

MOEE has, at the proponent's request, applied the provision of section 12.2 of the amended Act with respect to activities permitted before receiving approval.

You have the right to submit comments on the proposed undertaking, the environmental assessment and the proposed application of any particular new provision of the amended Act to this EA.

Notice of the submission of the EA Report and its availability for public review is being sent to those who participated during the study.

HOW DO YOU GET THE INFORMATION YOU NEED?

You may inspect the documents during normal business hours at the following locations:

MOEE - Environmental

Assessment Branch

250 Davisville Avenue
5th Floor
Toronto, Ontario M4S 1H2
(416) 440-3450

MTO-Central Region

Planning and Environmental Office
Atrium Tower, 3rd Floor
1201 Wilson Avenue
Downsview, Ontario M3M 1J8
(416) 235-5485

MOEE - Central Region

5775 Yonge Str., 8th Floor
North York, Ontario
M2M 4J1
(416) 326-6700

Municipalities

Clerk, Region of York

17250 Yonge Street
Newmarket, Ontario L3Y 6Z1
(905) 731-0201

Clerk, Region of Durham

605 Rossland Road East
Whitby, Ontario L1N 6A3
(905) 668-7711

Clerk, Town of Ajax

65 Harwood Avenue South
Ajax, Ontario L1S 2H9
(905) 683-4550

Clerk, Town of Markham

101 Town Centre Boulevard
Markham, Ontario L3R 9W3
(905) 477-7000

Clerk, Town of Pickering

1 The Esplanade
Pickering, Ontario L1V 6K7
(905) 420-2222

Clerk, City of Oshawa

50 Centre Street S.
Oshawa, Ontario L1H 3Z7
(905) 725-7351

Clerk, Town of Whitby

575 Rossland Road East
Whitby, Ontario L1N 2M8
(905) 668-5803

Clerk, Municipality of Clarington

40 Temperance Street
Bowmanville, Ont. L1C 3A6
(905) 623-3379

Local Libraries

Markham Community Library

6031 Highway 7
Markham, Ontario
(905) 294-2782

Pickering Public Library

1 The Esplanade
Pickering, Ontario
(905) 831-6265

Greenwood Library

(905) 693-8844

Whitevale Library

(905) 294-0967

Written comments from the public are requested by June 6, 1997.

Please send your comments to:

Highway 407 / Transitway EA
Mr. Nigel Wood, Review Co-ordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario M4S 1H2

Please send a copy to:

Highway 407 / Transitway EA
Ministry of Transportation
Planning and Environmental Office
Central Region, 3rd Floor, Atrium Tower
1201 Wilson Avenue
Downsview, Ontario M3M 1J8

TAKE THE OPPORTUNITY TO EXPRESS YOUR VIEWS

If you make a written submission to the Review Co-ordinator before the above date, your comments will be considered during the preparation of the MOEE review. A Notice of Completion of the Review will be published in a local newspaper when the Ministry review has been completed.

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in all submissions become part of the public record files for this matter and can be released if requested by any person.

Notice is being issued in accordance with new section 6.3 pursuant to an order under section 12.4(3).

Des renseignements sur ce programme sont disponibles en français en composant (416) 235-5633.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Notice of Submission of Environmental Assessment

The MTO determined that *A Notice of Submission of Environmental Assessment* was to appear in each of the following papers:

1. Toronto Star
2. Globe and Mail
3. Scarborough Mirror
4. Markham Economist and Sun
5. Ajax / Pickering New Advertiser
6. Oshawa This Week
7. Whitby This Week
8. Clarington This Week
9. L'Express

Notes on the History of the United States

The History of the United States

The history of the United States is a story of a people who have grown from a small colony of settlers to a great nation. The story begins with the first settlers who came to the New World in search of a better life. They found a land of opportunity and freedom, and they built a nation that has become a model for the world.

1. The first settlers came to the New World in search of a better life.
2. They found a land of opportunity and freedom.
3. They built a nation that has become a model for the world.
4. The story begins with the first settlers who came to the New World in search of a better life.
5. They found a land of opportunity and freedom.
6. They built a nation that has become a model for the world.
7. The story begins with the first settlers who came to the New World in search of a better life.
8. They found a land of opportunity and freedom.
9. They built a nation that has become a model for the world.
10. The story begins with the first settlers who came to the New World in search of a better life.

Appendix Two

Proponent's Executive Summary

Appendix Two

Proposed Executive Summary

EXECUTIVE SUMMARY

A. BACKGROUND & HISTORY

Highway 407 (see **Exhibit 1**) was initially considered during the 1940s and 1950s and, since that time, has been incorporated into the planning of all major transportation and land use decisions, for what is now known as the Greater Toronto Area (GTA).

In the early part of 1990, the Ministry of Transportation (MTO) carried out a Route Planning study to identify a technically preferred route for Highway 407/Transitway between Markham Road and Highway 35/115. This Route Planning Study evaluated several route alternatives on the basis of a broad range of environmental effects in consultation with affected agencies, municipalities and the public. The study identified a technically preferred route for the facility.

The original schedule for the construction of Highway 407 between Highway 403 in Oakville and Highway 35/115 in Clarington, anticipated a program that would meet the traffic demand without adversely affecting the local road system. However, in the early 1990's the construction of Highway 407 was accelerated when the Province announced a contract to develop, design and build Highway 407 from Highway 403 in the City of Mississauga to Markham Road in the Town of Markham. Under this accelerated program, the Highway 407 contract requires Highway 407 to be completed to Markham Road by the end of 1998. With the acceleration of the construction program for Highway 407 west of Markham Road, the construction of Highway 407 immediately east of Markham Road would not occur in

time to address significant traffic problems in the Markham area.

In early 1996, the Ministry evaluated the feasibility of ways of addressing the traffic concerns related to the planned 1998 completion of Highway 407 to Markham Road.

The Environmental Assessment Report documents the results of the studies that selected the technically preferred route and concluded with the decision to extend Highway 407 and a Transitway from Markham Road to Highway 7 east of Brock Road. The project location is shown on **Exhibit 2**.

B. PROBLEM AND OPPORTUNITIES

Chapter 2 of the EA Report provides a synopsis of the transportation analysis carried out for the project and documents the need for more transportation capacity.

Over the past three decades, numerous planning and transportation studies have been undertaken in west Durham and the eastern portions of Metropolitan Toronto and York Region. All of these studies recognized the transportation related constraints in and around the GTA and the need for additional east-west transportation capacity across the Metro-York/Durham Boundary. A number of these studies also recognized that a combination of roadway, transit and Transportation Demand Management (TDM) improvements is required to satisfy existing and future transportation demands.

For this EA, screenline analyses were carried out for three horizon years: 1998, 2011 and 2021. **Exhibit 3 (a)** displays the analysis for a scenario with Highway 407 extending to

Markham Road, while **Exhibit 3 (b)** shows the analysis of a scenario with Highway 407 extending to Brock Road/Highway 7 as a 4-lane "interim" freeway facility.

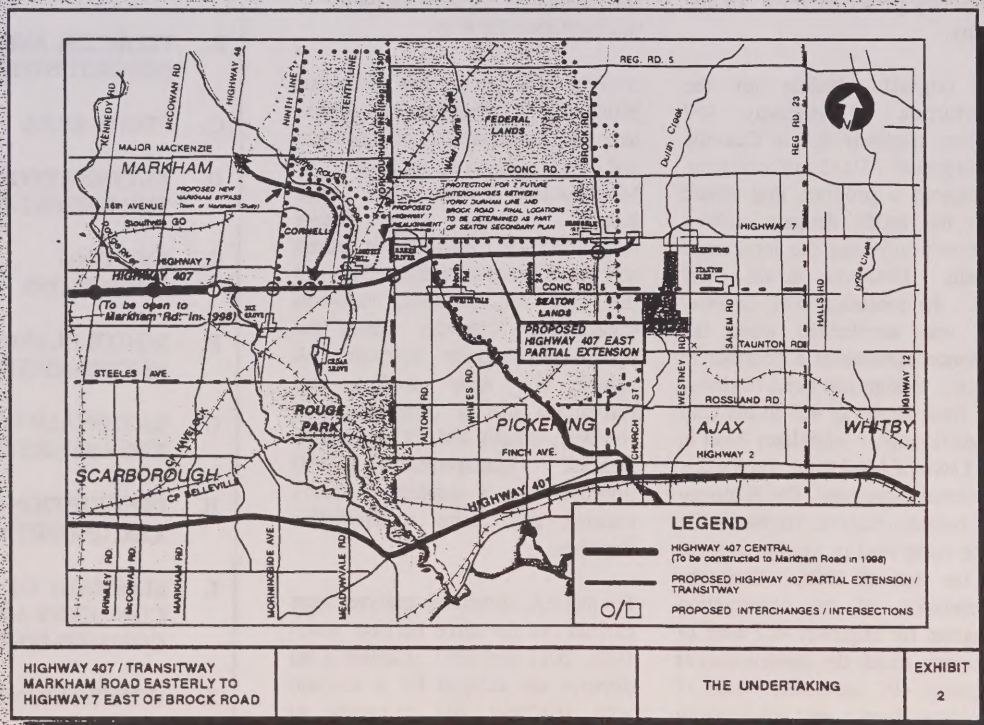
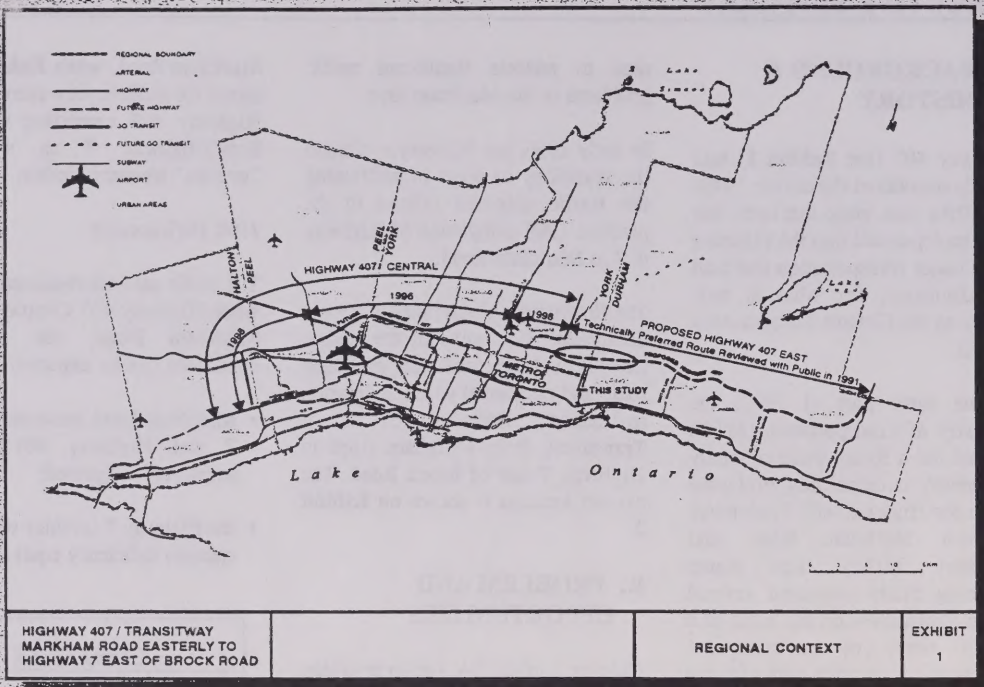
1998 Deficiencies

The traffic analysis demonstrates that when Highway 407 Central opens to Markham Road, the following conditions can be expected:

- Markham Road between Highway 7 and Highway 407 will be *extremely congested*;
- the Highway 7 corridor will have a capacity deficiency equivalent of 1-

CONTENTS

- A. BACKGROUND & HISTORY
- B. PROBLEM AND OPPORTUNITIES
- C. STUDY AREA
- D. ALTERNATIVES TO THE UNDERTAKING
- E. EXISTING CONDITIONS
- F. ROUTE PLANNING ALTERNATIVES
- G. RATIONALE FOR THE UNDERTAKING
- H. DESCRIPTION OF THE UNDERTAKING
- I. SUMMARY OF CONCERNS AND COMMITMENTS
- J. CONCLUSIONS



2 lanes of arterial capacity (one-way);

- traffic is expected to increase on: Highway 7 east of Markham Road; 14th Avenue; and Whitevale Road. This will result in increased traffic through the communities of Box Grove, Green River, Locust Hill, Whitevale, Brougham and Greenwood; and
- there will be deficiencies across the Metro-York/Durham boundary, even with the completion of the widening of Highway 401 to 12 lanes as far as Brock Road.

2011 Deficiencies

By 2011, there are expected to be *major* capacity deficiencies crossing the Metro-York/Durham boundary for both person and road demands. Transit ridership is estimated to increase by more than 50% in the peak hour across the boundary over 1998 volumes.

It also is expected that high density employment nodes will continue to be developed along the Highway 7/407 corridor through Markham and Vaughan, thereby creating opportunities for a major transit corridor to capture transit riders. The provision of transit in the Highway 7/407 corridor is essential to link Durham with York Region and north Metro through high quality transit connections and to achieve the transit capacity needed by 2011.

Even with Highway 407 as a four lane facility across the boundary (i.e. to Brock Road/Highway 7), there will be a total deficiency across the Metro-York/Durham boundary equivalent to 15 arterial lanes (one-way) across the entire screenline. In the Highway 7/407

corridor alone, there will be a capacity deficiency of 4 arterial lanes (one-way).

By 2011, there will be a deficiency east of Brock Road equivalent to a total of 10 arterial lanes (one-way) with or without the extension of Highway 407 to Brock Road.

2021 and Beyond

Studies show that both population and employment in the Region of Durham will more than double between 1998 and 2021¹.

Projections for the year 2021 show deficiencies at the Metro-York/Durham boundary in the Highway 401 and Highway 7/407 corridors of 15 and 7 arterial lanes respectively.

Beyond 2021, the GTA is expected to continue to be a major focus of industrial and business activity in Ontario. Therefore, while travel patterns may change and be mitigated by changes affected by demand, supply and growth management strategies, the travel demands in both the Highway 401 and Highway 7 corridors are expected to continue to grow.

Summary of Deficiencies

It is clear from the analysis carried out for this study and supported by past studies that there is a need for additional road and transit capacity within the Highway 7 corridor east of Markham Road. There are also limited opportunities for meeting this need through additional arterial capacity. It was on the basis of this need that the planning for the Highway 407/Transitway was carried out.

1 Population and Employment Outlook for the Greater Toronto Area, Hemson and Coopers & Lybrand, August 1993

C. STUDY AREA

For the purposes of the system planning phase and transportation analysis, the study area included the Greater Toronto Area (GTA) and adjacent regions influencing the travel demands within the GTA.

When reviewing extension/staging options, a study area between Markham Road and Sideline 14 in the Town of Pickering was used (see Exhibit 4).

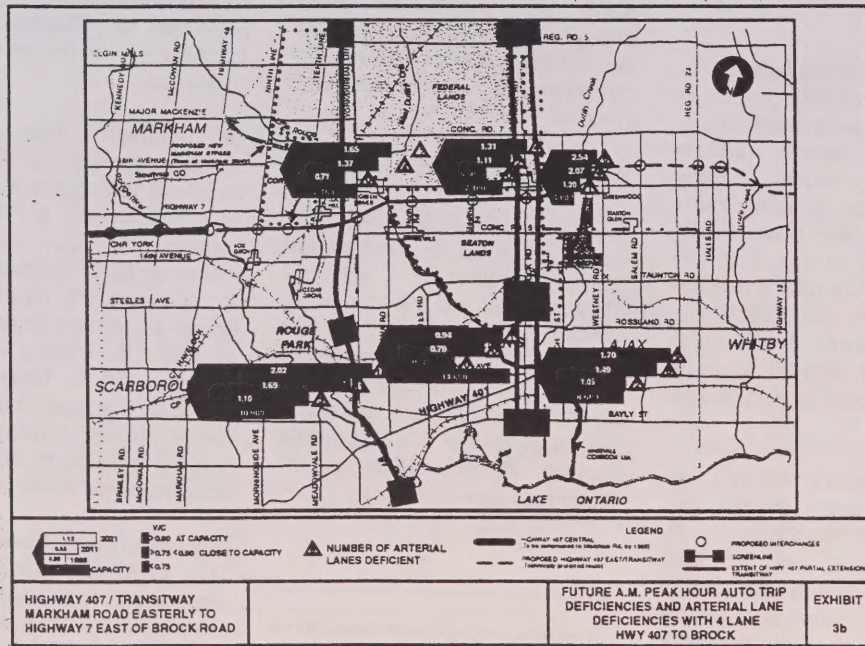
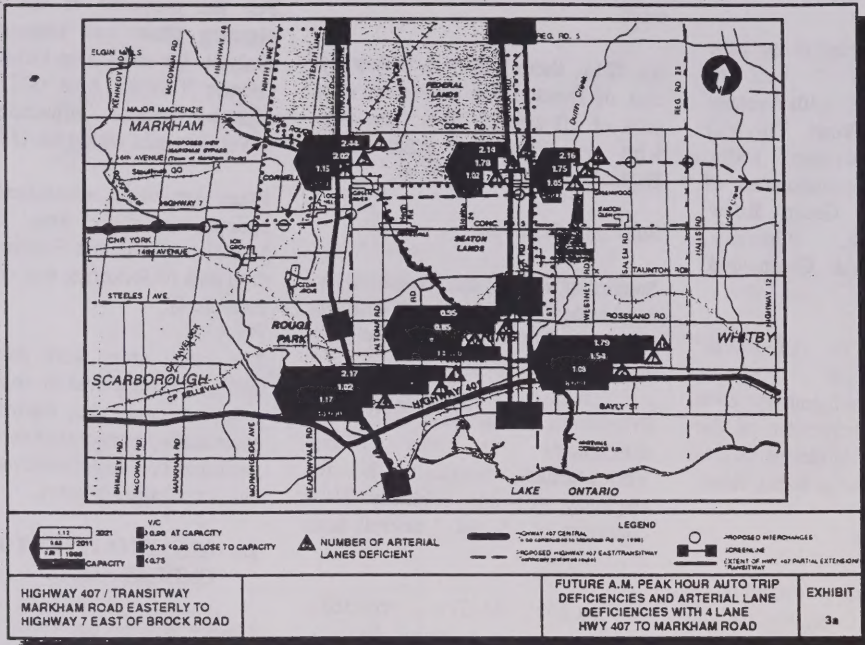
The study areas were determined taking into consideration existing and proposed land uses, environmental constraints, transportation network need and comments received during the consultation process.

D. ALTERNATIVES TO THE UNDERTAKING

Chapter 3 of the EA Report provides a description, assessment and evaluation of the planning alternatives which could be implemented to resolve the transportation/traffic problems presented in Chapter 2. The following alternatives were considered:

Do Nothing - This alternative assumes that Highway 407 will be completed and opened to Markham Road from the west, in 1998. It also assumes that there will be no improvements to increase vehicular and/or person trip capacity in and through the Durham Region in 1998, other than the ongoing widening of Highway 401 to Brock Road in Pickering. The study concluded that the do nothing alternative is not a practical solution to the problems being addressed in this study.

Improvements to Transit Service - This alternative includes possible improvements to GO Rail, heavy rail service, and local and inter-regional municipal transit. The study



concluded that transit improvements will not by themselves satisfy existing or future travel demands across the Metro-York/Durham boundary, or resolve anticipated traffic problems in the Markham Road area.

Improved Transportation System Management Measures (TSM) - This alternative involves measures to maximize existing infrastructure capacity such as improved signalization, addition of turning lanes at intersections, etc.

The analysis concluded that TSM measures could result in minor localized improvements on roadways within the Study Area. However, they will not adequately address the traffic problems in the Markham Road area. They will also not adequately address existing or future deficiencies in transportation system capacity across the Metro-York/Durham boundary.

Promotion of Transportation Demand Management (TDM) Improvements - This alternative includes such measures as telecommuting, trip sharing, developing High Occupancy Vehicle (HOV) systems, etc. The study concluded that TDM measures do not represent a practical solution to the defined short term problems in the Markham Road area and the deficiencies across the Metro-York/Durham boundary.

Upgrade Arterial/Municipal Roadways - This alternative involves expanding the existing municipal system to provide additional travel lanes and/or HOV or transit only lanes. However the analysis concluded that there is limited opportunity in both the short and long terms to affect the capacity concerns at Markham Road or increase the capacity across the Metro-York/Durham boundary

using existing or future arterial roads.

Growth Management - This alternative involves land use strategies to increase employment to population ratios thereby reducing the number of work trips across the Metro - York/Durham boundary. In the short and medium term time-frames (up to 20 years), there will be limited opportunities to affect significant changes in travel patterns through growth management. Therefore, this alternative has little potential for addressing the traffic problems and capacity deficiencies.

Extend Highway 407 Easterly - This alternative involves the extension of Highway 407 and a new transitway easterly from Markham Road. This alternative is the only planning alternative that will adequately satisfy existing and future transportation /traffic and social (community) issues.

Conclusion:

The analysis of the foregoing alternatives resulted in the decision that:

- Extending Highway 407 east of Markham Road as an "interim" 4-lane facility is a logical first priority in the package of improvements to resolve existing short term capacity deficiencies across the Metro-York/Durham boundary and traffic problems within communities in the Highway 7 corridor ("the problem"). This improvement, compared to the other planning alternatives, is the only one that satisfies both short and longer term mobility requirements.
- In recognition of the future anticipated travel demands a right-of-way for a basic 10-lane freeway facility will be protected for at this time.
- Also, in recognition of the future transit demands, as articulated in Chapter 2 of the EA Report, there is a defined need to protect for a higher

order transit facility or transitway which will parallel Highway 407.

The "key" reasons for the recommended planning alternative include:

- In the short term, it provides the maximum relief to the transportation problems related to the termination of Highway 407 at Markham Road. It also provides maximum relief to east-west capacity constraints across the Metro-York/Durham boundary.
- It represents a critical component in the future transportation networks for the Regions of Durham and York as previously identified in the Highway 407 Overview Study and the Regional Official Plans.
- It provides the opportunity to protect an appropriate right-of-way that allows for higher order transit service in the future.
- Improved transit services, TSM and TDM measures, upgrading of existing arterials and municipal roadways and community growth management within Durham, will not solve the short-term transportation problems.
- Even though the easterly extension of Highway 407 as a 4 lane facility will provide significant east-west capacity across the Metro-York/Durham boundary, it will not be able to satisfy all cross boundary traffic demands in year 2011 and beyond. The traffic analyses carried out for this Study have identified that an ultimate 10-lane extension of Highway 407 would best address the long-term capacity deficiencies within the study area.

Both the future 10-lane freeway and the transitway will form part of a balanced transportation plan for Durham, York and Metro and will serve to partially address future travel demand requirements in the Highway 7/407 corridor.

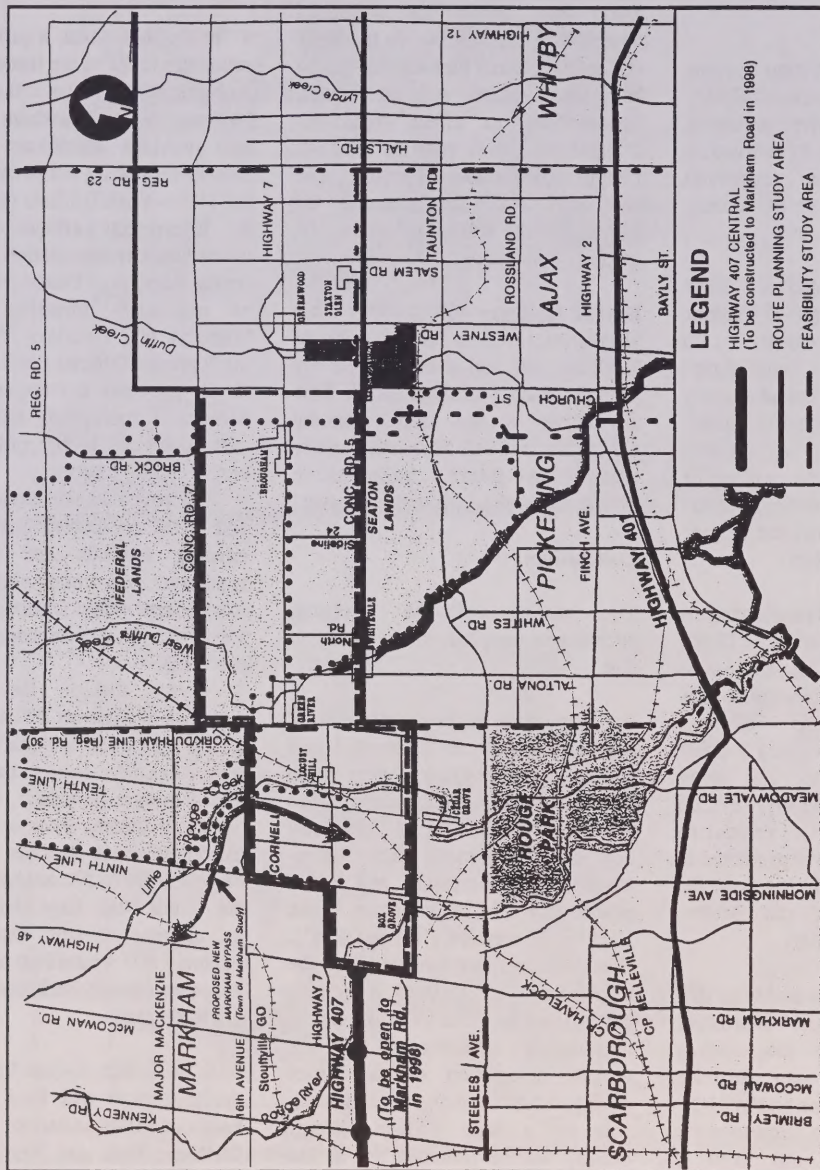


EXHIBIT
4

STUDY AREA

HIGHWAY 407 / TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

E. EXISTING CONDITIONS

Chapter 4 of the EA Report describes the existing conditions within the study area. The soils in the entire study area are classified as having Class 1-2 capability for agriculture. Although much of the area is in agricultural usage, the local Official Plans designate most of the land for non-agricultural uses. The exception is the Rouge-Duffins Agricultural Area between the Little Rouge and West Duffins Creeks.

Urban development is currently focused in the Town of Markham and in rural hamlets including Box Grove, Green River, Locust Hill, Whitevale and Brougham. Future urbanization is planned with major developments proposed in the Cornell and Seaton areas. Because of the proximity of the corridor to existing and proposed developments, noise and visual impacts were a consideration during route planning and assessment.

The major natural features in the study area are associated with the north-south oriented watercourses. Terrestrial and aquatic studies conducted for the EA show that the watercourses and valleys associated with the Rouge River, Little Rouge Creek, West Duffins Creek, Urfé Creek and a tributary of the West Duffins Creek and Brougham Creek provide the most significant fisheries and wildlife habitat.

These valley systems also provide valued corridor functions and therefore were a major consideration throughout the study. Many of these valley systems are within the proposed Rouge North Park, and the Whitevale Corridor ESA.

In addition to the valley systems, areas of upland vegetation were identified with certain significant

woodlots in the Town of Markham being avoided during route planning.

There are zones of high water table, groundwater recharge and upwelling that were important considerations in the identification and assessment of route alternatives.

The study area has numerous archaeological sites and several historical buildings. Therefore, impacts to heritage resources were considered during the assessment of alternatives.

The existing transportation network in the study area is comprised of a combination of federal, provincial and municipal roadways and transit systems. As discussed in Section B, dealing with problems and opportunities, this transportation system is currently experiencing considerable congestion and will be unable to handle the anticipated increase in travel demand.

There are no existing utilities nor geotechnical conditions within the study area that were considered to represent a major constraint during route identification or evaluation.

Based upon a thorough understanding of the study area, 26 factors and 88 associated indicators were identified and used in the evaluation of route alternatives. These indicators are described in Appendix 1 to the EA Report.

F. ROUTE PLANNING ALTERNATIVES

Chapter 5 of the EA describes the Route Planning phase of the study in detail. This phase of the study was completed in 1992. During this phase of the study, alternative route segments were identified using a constraints approach. In other words major constraint areas were avoided where possible. The route alternatives, and constraints affecting their selection

are shown in **Exhibit 5**. The various route segments were assessed with respect to their impact on 88 indicators under the following factor areas:

- Natural Environment
- Social Environment
- Cultural Environment
- Agriculture
- Economic Environment
- Transportation and Engineering

The assessment led to the identification of the Technically Preferred Route shown in **Exhibit 2**.

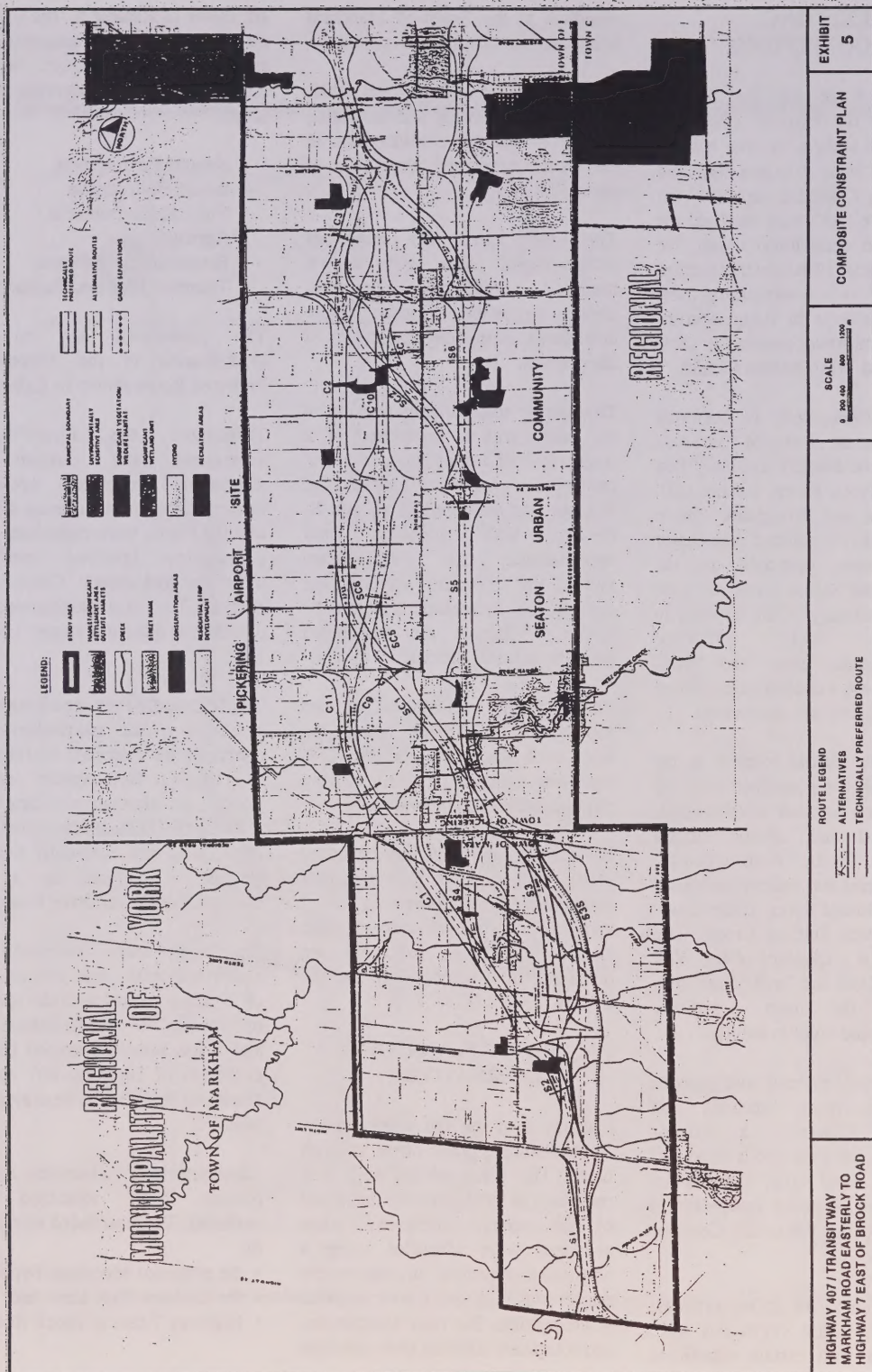
Throughout the identification, assessment and analysis of alternatives, external agencies, municipalities, special interest groups and the public were consulted. This consultation involved mailings, meetings, and Public Consultation Sessions. The consultation process is described in detail in Chapter 1 of the EA.

The Technically Preferred Route was presented to the stakeholders and comments were invited. In response to a request from special interest groups, an alternative location for crossing the Little Rouge Creek was investigated and eventually selected because it crossed at a less environmentally sensitive location.

Significant traffic increases are anticipated on the road network east of Markham Road with the opening of Highway 407 to Markham Road, and it has been determined that an extension of Highway 407 east of Markham Road is the best available solution.

Subsequently 3 extension staging options were identified and evaluated. These included extensions to:

- the proposed Markham Bypass;
- the Durham-York Line; and
- Highway 7 east of Brock Road.



Each option followed the technically preferred route identified through the Route Planning phase.

The 3 options, along with the "Do-nothing Option", were evaluated in light of the environmental, social, cultural, agricultural, economic and transportation implications. Since many of the impacts had already been dealt with during the Route Planning phase, the key determining factor in evaluating the extension staging options was the traffic implications in the communities of Markham, Green River, Whitevale, Box Grove, Locust Hill, Brougham and Greenwood. **Exhibit 6** shows the projected traffic impacts of each option on the local communities based on traffic modelling.

As described in Chapter 5 of the EA, the extension to Highway 7 east of Brock Road was necessary to minimize any potential increase in traffic through local communities. This extension results in a lowering of traffic in all communities other than Greenwood. Although the traffic increase in Greenwood is not expected to be significant, the Town of Pickering and Region of Durham are currently investigating a combination of traffic calming and roadway improvements to address these traffic concerns.

G. RATIONALE FOR THE UNDERTAKING

The environmental assessment concluded that the selected route was optimal from a number of standpoints including:

- The route takes maximum advantage of opportunities to avoid social, environmental, and engineering constraints identified through the data collection process;
- The route minimizes impacts upon established communities;
- The route is the most compatible with federal, provincial and municipal policy initiatives; and

- The preferred alternative is reasonably direct through the study area.

Furthermore the study concluded that the immediate extension to Highway 7 east of Brock Road was preferred for the following reasons:

- Terminating Highway 407 at Markham Road (i.e. Do Nothing) is not a desirable option because it does not address the significant traffic problems that will be experienced in the Town of Markham and communities east of Markham Road with the opening of Highway 407;
- Many of the public comments received expressed a general desire to extend Highway 407 to the east of Brougham as soon as possible;
- Although this option impacts the natural and cultural environment, and agricultural lands, it reduces projected traffic volumes on Markham Road and within the villages of Green River, Whitevale, Locust Hill, Box Grove and Brougham, without significantly increasing the traffic volumes through other communities. The other options did not result in reduced traffic volumes in all of these communities.
- This option is acceptable to the Town of Markham and the Regional Municipality of York because it relieves the future traffic volumes in the Town of Markham, Box Grove and Locust Hill, and supports the Cornell development.
- This option is strongly preferred by the Town of Pickering and the Regional Municipality of Durham because it relieves the future traffic volumes in Green River, Whitevale and Brougham, and supports economic development in the Durham Region.
- There is also general public support for this option because it will reduce traffic volumes in the communities along the route.
- This option crosses several significant watercourses, and concerns have been expressed by regulatory agencies, interest groups and the public. The impacts have been reduced through the development of an

alignment through the Route Planning Study that avoids more sensitive environmental features. In addition, bridges are proposed at the major river crossings to further reduce the impacts on vegetation, fisheries and wildlife. Extensive consultation with affected stakeholders during the Feasibility Study resulted in the development of a Stakeholder Consultation Process, which identifies commitments to future work and mitigation of environmental impacts during the design and implementation phase. It also specifies a process through which stakeholders are involved with the design and construction process. As well, further public consultation sessions will be held to receive additional input. These commitments are discussed in more detail in Section I below, and in Chapter 6 or the EA Report.

H. DESCRIPTION OF THE UNDERTAKING

In 1997, the EA Act was amended. This EA for Highway 407 and a Transitway is being submitted in accordance with the transition provisions of the amended Act. As such, MTO has requested to have Part II of the previous EA Act; and those provisions of Part II of the new Act with respect to mediation and the Section 12.2 activities permitted before approval, to apply to this EA.

The location of the undertaking for which approval is being sought is illustrated in **Exhibit 2**. The undertaking includes the:

- Design, construction, operation and maintenance of a freeway (up to 10 basic lanes) with a basic minimum 100m right-of-way from Markham Road easterly to Highway 7 east of Brock Road;
- Design, construction, operation and maintenance of a transitway with a basic minimum 60 metre right-of-way from Markham Road easterly to Highway 7 east of Brock Road;

407 Terminus at	Green River Hwy 7 East of RR30 Westbound		Whitvale Conc.5 East of Allona Westbound		Locust Hill Hwy 7 East of 10th Line Westbound		Box Grove East 14th Ave East of Ninth Westbound		Box Grove West 14th Ave West of Ninth Westbound	
	Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease	
	volume [1]	% diff. [2]	volume	% diff.	volume	% diff.	volume	% diff.	volume	% diff.
Markham Road	85	10%	10	5%	100	15%	40	10%	-100	-10%
Markham By-Pass	125	15%	10	5%	-460	-60%	-170	-35%	-110	-15%
York Road 30	-40	-5%	-15	-5%	-355	-45%	-45	-10%	-160	-20%
Brock Road/Hwy 7										

407 Terminus at	Brougham East Hwy 7 East of Brock Westbound		Brougham West Hwy 7 West of Brock Westbound		Greenwood East 6th Conc. East of Westney Westbound		Greenwood West 6th Conc. West of Westney Westbound	
	Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease	
	volume	% diff.	volume	% diff.	volume	% diff.	volume	% diff.
Markham Road	35	5%	40	5%	-30	-35%	25	25%
Markham By-Pass	70	10%	70	15%	15	20%	20	20%
York Road 30	-280	-45%	-185	-35%	165	220%	220	220%
Brock Road/Hwy 7								

Note:

Base Condition -Based on 1998 a.m. peak hour volume projections

[1] - Based on 1998 a.m. peak hour volume projections

[2] - % Increase/decrease in traffic between Base Condition and extension alternative

HIGHWAY 407 / TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

COMMUNITY TRAFFIC IMPACTS

EXHIBIT
6

- Design, construction, operation and maintenance of full interchanges at Markham Road, the 9th Line, Markham Bypass, the Durham-York Line (Regional Road 30), and Brock Road;
- Design, construction, operation and maintenance of two interchanges between the Durham-York Line and Brock Road at specific locations to be determined at a later date as part of the Seaton planning process (See Chapter 4 of the EA Report for a description of the Seaton development proposal);
- Design, construction, operation and maintenance of a realignment of Highway 7 and 11th Line at the Durham-York Line to allow for the Highway 407 interchange;
- Design, construction, operation and maintenance of a connection to Highway 7, east of Brougham permitting access to and from both the east and the west;
- Design, construction, operation and maintenance of grade separations at 10th Line in Markham, and North Road, Sideline 24 and Sideline 16 in Pickering, and the CPR Havelock Subdivision west of the Little Rouge Creek;
- Closure of all north-south roads crossed by Highway 407/transitway where interchanges or grade separations have not been indicated; and
- Acquisition of property for, and construction of the ultimate Highway 407/Transitway and associated features, which may include but are not limited to: stormwater management facilities; temporary construction easements; access roads; and mitigation/compensation measures.

Approval of the undertaking by the Minister of Environment and Energy will allow the Ministry of Transportation (MTO) or its agent to:

- refine the alignment and property requirements for the

- undertaking during the design phase;
- file a designation plan for the undertaking;
- acquire property necessary for implementation of the undertaking; and
- design, construct, operate and maintain the completed highway and transitway, and the associated features.

Implementation of the undertaking will take place over a number of years and reflect financial conditions and traffic/transit demands. It is likely that the implementation of the project will be staged. This staging may include:

- Phasing of the ultimate basic 10 lane highway cross section to respond to traffic demands. Initial construction could consist of 2 basic lanes per direction, plus auxiliary lanes where required. The additional lanes would be added as traffic demands grow and downstream roadway capacity to handle the added traffic is in place.
- Opening of the highway to traffic as sections become available for use.
- Staging of some interchanges and grade separations with at grade intersections initially.
- Staging of interchange ramps to provide for moves restricted to certain directions initially with others being added when traffic demands/network development warrant.
- Provision of an interim connection at Highway 7 east of Brock Road
- Construction of a Transitway in a separate corridor adjacent to Highway 407.

It is important to note that mitigating measures will be planned and designed on the basis of the ultimate facility. However, the implementation of mitigating measures may also be phased in accordance with the impacts associated with each phase of implementation.

Note: The approval being sought by this EA, and the commitments made in this EA, will apply to and be

binding upon the Ministry of Transportation, its agents, successors, transfers and/or assigns, and will be applicable to the design, construction, operation and maintenance of the undertaking.

I. SUMMARY OF CONCERNS AND COMMITMENTS

Throughout the planning of this undertaking, the Project Team sought to identify areas of environmental concern and to identify a route that was sensitive to these concerns. With a project of this nature, it is not possible to avoid all environmental impacts. Therefore, it will be important that during the design phase, measures are developed to further reduce unavoidable impacts. A key component of this effort to reduce environmental impacts is the *Stakeholder Consultation Process* that was developed with extensive input by the stakeholder agencies. It was also reviewed with the public and interest groups at the last round of public consultation sessions.

The design team will meet with the stakeholders on a regular basis during the design and construction phase. A schedule of meetings will be established at the outset of consultation to ensure that stakeholders can effectively schedule their participation. As well, all meetings will be documented.

To keep the public informed through the design phase and to allow for public input, two public consultation sessions will be held during the design phase. In addition, public notification of the commencement of construction will be provided.

Specific commitments to environmental protection measures, ongoing consultation and follow-up monitoring will be documented in "Design and Construction Reports" and made available to the

stakeholders for review and comment prior to the commencement of construction.

During the consultation phase of this study, numerous specific commitments were made to ensure that environmental and cultural resources are protected. These commitments are detailed in Chapter 6 of the EA Report and summarized in Table 6.6.1 - **A Summary of Concerns/Potential Effects/ Proposed Mitigating Measures and Commitments to Further Work.**

Table 6.6.1 documents the specific environmental concerns, who raised the concern, what the potential effect could be, and how these effects will be addressed. It should be read in conjunction with the 1:10,000 Plates illustrating the undertaking - also provided in Chapter 6. The commitments that apply to the entire route are attached to this summary.

J. CONCLUSION

Traffic studies demonstrate that there will be serious traffic problems on the area road network east of Markham Road and in communities to the east when Highway 407 opens at Markham Road without an easterly extension of Highway 407. Furthermore, studies show that there is a significant shortfall in east-west transportation capacity in the Highway 7 corridor and across the Durham-York boundary.

An extension of Highway 407 and a Transitway is needed to address these immediate and longer-term transportation problems.

The analysis shows that this extension must go as far east as Highway 7 east of Brock Road to minimize traffic impacts on the local communities.

The proposed route has been selected from a number of alternatives, giving consideration to a broad range of environmental, social, cultural, economic and transportation concerns. As well, the affected government agencies, municipalities, interest groups and public have been involved throughout the study. This involvement has resulted in ongoing refinements to the project.

The Stakeholder Consultation Process to be implemented as part of the design and construction phase is unique and will ensure that stakeholders have the opportunity to work with the design team to address site specific environmental concerns. This will ensure that the project is implemented in a way that is sensitive to the environment, and public and agency concerns.

SUMMARY OF CONCERNS/POTENTIAL ENVIRONMENTAL EFFECTS/ PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Table 6.6.1 in the EA report provides a summary of: environmental issues/concerns; the concerned external interests that identified the issues; the potential environmental effects of the undertaking; the proposed mitigating measure; the commitments to future work; and where in the EA Report further discussion of the mitigating measure can be found.

Steps taken during the design stage of the project to address and finalize environmental commitments will be documented in "Design and Construction" reports which will be available to stakeholder agencies for information and monitoring purposes prior to construction.

The following summarizes the commitments that apply to the entire undertaking. The reader should refer to the complete Table in Chapter 6 of the EA, for the site specific commitments.

In Table 6.6.1, the following shortforms apply:

MNR	- Ministry of Natural Resources	DFO	- Department of Fisheries and Oceans
MOEE	- Ministry of Environment and Energy	DOE	- Environment Canada
MTRC	- Metro Toronto Region Conservation	MCzCR	- Ministry of Citizenship, Culture and Communications
RPA	- Rouge Park Alliance	LACAC	-Local Architectural Conservation Advisory Committee
SCP	- Stakeholder Consultation Process		

NOTE: Reference in this Table to the impacts of culverts is intended to make the reader aware of the potential for the use of culverts at some crossings. However, as stated throughout this EA, the actual type of crossing to be employed will not be determined until the design stage, and will be done in consultation with the affected stakeholders.

TABLE 6.6.1
SUMMARY OF CONCERNS/POTENTIAL EFFECTS/PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Location	Environmental Issues/ Concerns	Concerned Group/Agency	Potential Environmental Effects of the Undertaking	Proposed Mitigating Measures, Commitments to Further Work	Comments
Entire Route	Upstream flood levels and downstream erosion at watercrossing.	MNR, MTRC, MOEE, RPA, Municipality, Public	Restriction of the valley could cause increased flood levels upstream, and increased water velocity resulting in downstream erosion.	A drainage analysis will be carried out to ensure that crossings are designed to minimize erosion and flood risk.	See Section 6.4.1
	Runoff impacts on watercourses	MNR, MOEE, MTRC, RPA, Municipality, DFO, DOE, Interest Groups, Public	Stormwater runoff can adversely affect water quality, fish habitat and stream erosion.	Stormwater management plan will be developed. Erosion control plan will be developed.	See Section 6.4.1
	Archaeological sites	MCzCR, LACAC, Municipality	Loss of archaeological resources.	Pre-construction archaeological surveys and mitigation will be done in consultation with Heritage agencies.	See Section 6.4.3
	Fish habitat	MNR, MTRC, RPA, DFO, DOE, Interest Groups, Public	Harmful alteration of fish habitat.	Stream assessment and crossing design in accordance with SCP. Compensation plans in accordance with Fisheries Act.	See Sections 6.3.2 & 6.4.1
	Groundwater upwelling areas	MNR, MOEE, MTRC, DFO, DOE	Culverts can interfere with upwelling areas adversely affecting baseflows to coldwater streams.	Open-bottomed culverts/bridges will be considered in upwelling areas.	See Section 6.4.1

SUMMARY OF CONCERNS/POTENTIAL EFFECTS/PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Location	Environmental Issues/ Concerns	Concerned Group/Agency	Potential Environmental Effects of the Undertaking	Proposed Mitigating Measures, Commitments to Further Work	Comments
Entire Route	Spills	MOEE, MNR, MTRC, RPA, DFO, DOE, Interest Groups, Public	Spills can cause adverse effects on surface and ground water and soils.	Ease of containment of spills at stormwater management facilities will be reviewed during design.	See Section 6.4.1
	Contaminated sites	MOEE	Unknown contaminated sites may be encountered during design or construction.	A Phase 1 assessment of property is currently underway. Sites will be managed in accordance with MOEE's decommissioning guidelines.	See Section 6.4.1
	Noise	MOEE, Municipality, Public	Increased noise	Detailed noise studies will be carried out during design phase and appropriate mitigating measures will be determined.	See Section 6.4.2
	Agricultural land	OMAFRA, Public	Loss of prime agricultural land.	Impact reduced through planning. Opportunities for further reduction will be considered during design.	See Section 6.4.4
	Impacts on wells/septic systems	MOEE, Municipality, Public	Reduction in supply. Impacts on quality and quantity of groundwater. Possible pathway to aquifers if not properly abandoned.	Contractor will be responsible for correcting impacts resulting from construction. Wells and septic systems removed from service will be properly abandoned/ decommissioned.	See Section 6.4.1
	Impacts on groundwater recharge areas.	MOEE, MNR, MTRC, Municipality, DFO, DOE	Roadway runoff and spills can adversely affect groundwater quality.	Stormwater management plans will be developed to minimize the effects of stormwater. (See spills.)	See Section 6.4.1

Topic	Sub-Topic	Key Concepts	Learning Objectives	Assessment Methods	Resources
Mathematics	Algebra	Linear Equations	Understand the relationship between variables in a linear equation.	Written tests, problem-solving exercises.	Textbook, online resources.
	Geometry	Area and Perimeter	Calculate the area and perimeter of various shapes.	Practical exercises, group projects.	Geometric shapes, measuring tools.
	Calculus	Differentiation	Find the derivative of a function.	Written tests, problem-solving exercises.	Textbook, online resources.
	Statistics	Data Analysis	Analyze and interpret data sets.	Group projects, case studies.	Data sets, statistical software.
Science	Physics	Mechanics	Understand the laws of motion and forces.	Practical experiments, written tests.	Physics lab equipment, textbooks.
	Chemistry	Atomic Structure	Describe the structure of atoms and molecules.	Written tests, practical exercises.	Chemical models, textbooks.
	Biology	Cell Structure	Identify the components of a cell.	Practical exercises, group projects.	Microscope, cell models.
	Environmental Science	Climate Change	Understand the causes and effects of climate change.	Group projects, case studies.	Climate data, environmental reports.
Social Sciences	History	World War II	Understand the causes and consequences of World War II.	Group projects, case studies.	Historical documents, textbooks.
	Geography	Physical Geography	Describe the physical features of the Earth.	Group projects, case studies.	Maps, globes, textbooks.
	Political Science	Democracy	Understand the principles and practice of democracy.	Group projects, case studies.	Political documents, textbooks.
	Economics	Supply and Demand	Understand the relationship between supply and demand.	Group projects, case studies.	Economic data, textbooks.
Languages	English	Reading Comprehension	Understand and analyze texts.	Written tests, group projects.	Textbooks, reading materials.
	Spanish	Basic Grammar	Understand the basic grammar rules of Spanish.	Written tests, practical exercises.	Spanish textbooks, audio resources.
	French	Vocabulary Building	Expand vocabulary in French.	Group projects, case studies.	French dictionaries, textbooks.
	German	Reading Comprehension	Understand and analyze texts in German.	Written tests, group projects.	German textbooks, reading materials.

Appendix Three

Government Agency Comments

EA Review: Highway 407 / Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)

Summary of Review Team Comments By Agency	
Agency	Comments
Environment Canada	• The wording is not specific enough in regards to certainty of application of some of the 'commitments' to protect water quality. Involvement by appropriate government agencies during the detailed design and construction phases would help to ensure that the proper measures are undertaken. • In order to minimize negative impacts on migratory bird habitat, we expect a firm commitment by the proponent to use native species to the maximum extent possible. We recommend the planting of several small demonstration plots of native grasses and forbs in areas of low erosion potential. • It is important that the topsoil remains on site to preserve the seed bank, and provide adequate nutrients for the native species used in rehabilitation. • If there is insufficient area available at the site to store all of the topsoil at a maximum depth of 1 m, we suggest that the top 10 cm of the soil profile be skimmed off and be treated in this manner, as this layer contains the bulk of the seed bank. • Environment Canada wishes to be involved in the development of planting programs to encourage habitat/corridor functions at watercourse crossings. We also wish to review the rehabilitation plan at a later stage, to ensure that practical wildlife habitat enhancements have been incorporated to the greatest extent possible.
Canadian Coast Guard	• Further comments to be received. • Approval of bridge section (5 11) of the NWPA requires CEAA review. We will be co-ordinating the CEPA review for DFO.
The Canadian Transportation Agency	• The proposed highway will cross CP Rail's Havelock Subdivision, yet there is no application for that crossing or any details of the crossing in the EA Report.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Department of Fisheries and Oceans	• Several watercourse crossings are proposed, yet the details have not been development. It is not known whether the construction methods or the structures proposed will impact fish and fish habitat. • The best available technology is to be used in the construction of all watercourse crossings. • Sedimentation and erosion control measures are to be implemented during the construction and site rehabilitation phase to prevent entry of sediment into the water. All disturbed areas are to be stabilized upon completion of work. • No inwater work/ activity shall occur during spawning, nursery or migratory periods for local fish populations. Some flexibility in timing restrictions may be possible, but would be made on a site by site basis. Formal requests for variance on timing restrictions would have to be made to the OMNR for the approval or concurrence. • All activities, including maintenance procedures, must be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the watercourse. Vehicular refuelling and maintenance must be conducted away from the watercourse and its banks. • Instream construction is to be carried out in the dry, where feasible, through the use of coffer dams. • A rehabilitation plan should be developed to restore the construction site to its original state, or better. • If a Fisheries Act authorization is required for a crossing, a habitat compensation plan and a Monitoring Program must be approved by DFO-FHM. Contingency plans may be required. • Stormwater management facilities should be off-line of the watercourse and should deal with water quality and quantity, including temperature and sedimentation. • Open-bottomed culverts are a second choice to bridges in groundwater upwelling areas. • Potential impacts to coldwater streams, including water temperature, upwelling areas must be determined and mitigated. • The proponent must clearly demonstrate where the direct discharge of bridge runoff to a watercourse would occur and why prescribed stormwater management plans can not be employed. • More information is needed on the 100 m ROW and transitway's 60 m ROW. • How and what mitigation measures will be used to reduce impacts from future lane expansion.
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EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Ministry of Environment and Energy - Planning and Analysis Branch	• The proponent has recognized that ecosystem principles should be considered when assessing impacts and evaluating alternative routes and has also recognized appropriate stakeholders. This approach is acceptable and we encourage the proponent to incorporate these principles and linkages in future EA submissions. • There is updated hydrogeology information available in existing watershed and subwatershed plans in the area that should be considered in the design process and for water quality and quantity issues. • <i>The Design and Construction reports are to be submitted to the Director of the Central Region Office of the MOEE a minimum of 90 days prior to the commencement of construction.</i> • <i>During that design phase, the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit station, the maintenance/storage yards and the commuter parking lots shall be decided on in consultation with the Noise Assessment Unit of the MOEE.</i> • <i>The sections of the Design and Construction reports dealing with noise and vibration shall be submitted to the Director of the Approvals Branch a minimum of 90 days prior to construction.</i> • <i>The report shall be subject to approval by the Director and shall, in addition to the analysis of the operational noise impacts and the inclusion of proposed noise control measures, provide documentation on: the measures which will be taken to minimize the noise and vibration impacts generated by pile driving and blasting operations should requirements for such operations be identified in the design stage, the resultant increases in operational noise levels along the roadways leading to/from the facility, and the measures which will be taken to minimize the increases in noise levels and the anticipated effectiveness of these measures.</i>
Ministry of Agriculture, Food and Rural Affairs	• "This Ministry is satisfied with the data, analysis and conclusion, the method of implementation and the monitoring and contingency plans that have been outlined within the EA report."

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Ministry of Natural Resources	• There are no concerns provided consideration is given to final comments. • The Ministry endorses the concept of the SCP, a design, input, review process involving stakeholders listed in the EA. • Additional information and commitments are required regarding: groundwater, access and service roads, maintaining permanent riparian separations between eastbound and westbound lanes to accommodate wildlife passage at stream crossings, establishment of priorities for monitoring highway impacts, guarantees for trails in areas as designated by planning authorities. • Clarification is required for Official Plan resolutions re: Finch Ave. And Rossland Road. • MNR should be consulted on any issues that relate to the water table or ground water to guarantee that fisheries concerns are addressed. • All stormwater facilities should be designed to minimize increases in water temperature, maximize the removal of contaminants and prevent sediment input to receiving water bodies. Stormwater inputs must take into consideration losses in natural groundwater storage, and impacts to base flow of affected streams. This Ministry expects that open bottomed culverts and bridges would be required in upwelling areas to protect ground water function. • A commitment to conduct hydrogeological studies should be made with input from the MOEE to prevent negative impacts to significant cold water fisheries along and immediately downstream of the proposed corridor. Issues relative to groundwater recharge/discharge must be reviewed with regulatory agencies. • Impacts of access roads required to complete the undertaking have not been presented in the EA document. • The highway must be designed to leave a permanent light window between highway bridge structures. • Monitoring should take into account present day monitoring programs of MOE and MNR for groundwater, contaminants, invertebrates and fisheries. It should also take into account activities of facility construction and staging of construction. • Consideration should be given for recreational trails at specific crossings that may be requested by municipalities, conservation authorities and MNR. • Impacts of the transitway adjacent to the Highway 407 cannot be fully realized until designs are completed. These issues should be included in the Stakeholder Consultation Process. • Significant valley lands/wildlife habitats must be protected, particularly in the Whitevale corridor ESA. • Landscape features at Concession 5 are suitable for conveying wildlife, therefore a structure designed to move wildlife under the Highway 407 would be appropriate at one of the AL1400 and AL1420 locations. • With the exception of bridges already indicated by MTO, all other crossings shall have structure design selection at crossings determined during the SCP.
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EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

The Metropolitan Toronto and Region Conservation Authority	• Analysis related to the transitway should be expanded on. The Stakeholder Consultation Process should be expanded to include issues related to both design and environmental mitigation measures related to both the roadway and transitway components. • Two ongoing planning initiatives should also be recognized within the document and during the design stage: the Rouge Park North Plan and the proposed land use study of the Provincial Agricultural Preserve Lands. • Ancillary works related to the Highway/Transitway are not adequately defined. • Some form of commitment to an action plan based on monitoring should be investigated and included. The SCP could be amended to include a commitment for full time site monitoring at specific sites as defined through the SCP. • The design and construction plans should both be available for agencies to review. • There is a conflict within the document whether a crossing south of Steeles Avenue is to be constructed. • No reference is made to potential mitigation of groundwater recharge to the base flow of receiving streams due to the roadway/transitway. The SCP should clearly identify that the stormwater treatment for the Highway/Transitway key on infiltration techniques to mitigate these issues. • Timing issues related to migration and spawning of fisheries will be a constraint to construction therefore the statement that staging of construction has no environmental impact is misleading. • The construction of the transitway is defined in a separate corridor adjacent to Highway 407: the Authority believes that the design of this facility should be undertaken in combination with the highway design to address both technical, environmental and economic issues.
Town of Whitby	• The EA does not address the interim traffic impacts east of Highway 407's proposed Pickering terminus on the arterial road grid into Whitby. • Encourage the initiation of a transportation impact and solutions study to review improvements to the existing arterial grid and interim improvements including: improvements to Highway 7 east of the interim Highway 407 Pickering terminus including a by-pass around Brooklin, securing Lakeridge Road between Highway 401 and Highway 407 as a high speed arterial link and to the construction of an interchange at Lakeridge Road and Highway 401 to provide better connectivity to Highway 407 and to relieve urban streets from through traffic.
York Region	• The Regional Council has endorsed the MTO's Environmental Assessment Report.
Durham Region	• The EA is recommended by the Planning Committee to be endorsed and construction is requested to be commenced at the earliest opportunity. • The feasibility of implementing a by-pass of Green River is requested. • The MTO is requested to reactivate the EA study for the remainder of the Highway 407 east extension through Durham Region.
City of Oshawa	• No comments.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Town of Pickering	• Council of the Town of Pickering supports in principle the Highway 407/Transitway EA on the basis that the Town's position with respect to certain matters be dealt with during the detailed design phase. • Such matters include protection for two interchanges in Seaton; ensuring that North Road and Sideline 24 are not dead-ended at their approach to Highway 407; accommodating a continuous bikeway within or adjacent to the Highway 407/Transitway corridor; ensuring that within the Town of Pickering, Highway 407 is open with access completed to Highway 7 east of Brock Road; ensuring that no at-grade intersections are provided in Pickering other than at Brock Road as an interim measure; accommodating a grade-separated crossing of Highway 407 at Brock Road; and providing for realignment of Highway 7 around the hamlets of Green River and Brougham.
Municipality of Clarington	• No concerns.

Ministry of
Transportation

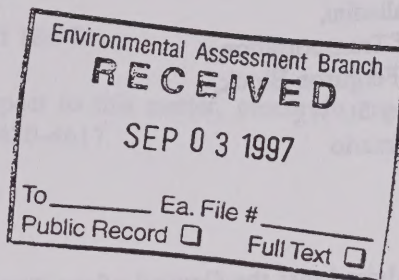
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Ministère des
Transports

Bureau du ministre

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August 25, 1997

Mr. Bruce Taylor
Town Clerk
Town of Pickering
Councillor's Office
Pickering Civic Complex
One the Esplanade
Pickering, Ontario
L1V 6K7

Dear Mr. Taylor:

Thank you for your letter of July 2, 1997, advising of Pickering Council's resolution of support for the Ministry's Environmental Assessment for Highway 407/Transitway from Markham Road Easterly to Highway 7 East of Brock Road

Throughout the preparation of the Environmental Assessment (EA) the Ministry has worked extensively with all of its partners to put in place an appropriate process to address existing and future concerns relative to this project. The Stakeholder Consultation Process proposed in the EA document, will ensure that all important issues itemized in the resolution of June 23, 1997 will be examined in consultation with the Town of Pickering during the future design and construction phases.

I would like to thank Town of Pickering Council for their support of this very important project.

Sincerely,

COPIES SIGNED BY
MINISTER

AUG 28 1997

Al Palladini
Minister

90

cc: N. Wood, Ministry of Environment & Energy



July 2, 1997

The Corporation
of the
Town of Pickering

Councillor's Office

Pickering Civic Complex
One the Esplanade
Pickering, Ontario
Canada
L1V 6K7

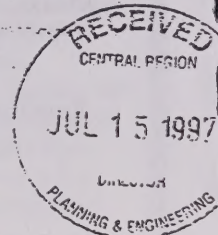
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Hon. Al Palladini,
Ministry of Transportation
3rd Floor, Ferguson Block,
77 Wellesley St. W.,
Toronto, Ontario
M7A 1Z8

RECEIVED

JUL 07 1997



Please be advised that the Council of the Town of Pickering passed the following resolution at its meeting of June 23rd, 1997:

1. THAT Council advise the Ministry of Environment and Energy that it supports in principle the Highway 407/Transitway (Markham Road easterly to Highway 7, east of Brock Road) Environmental Assessment, on the understanding that the Town's position with respect to the following matters can be dealt with during the detailed design phase:
 - (a) protection for two interchanges in Seaton, but not located on either North Road or Sideline 24;
 - (b) ensuring that North Road and Sideline 24 are not dead-ended at their approach to Highway 407 (i.e. that grade-separations are provided);
 - (c) accommodating a continuous bikeway within or adjacent to the Highway 407/Transitway corridor;
 - (d) ensuring that within the Town of Pickering, Highway 407 is open with access completed to Highway 7, east of Brock Road;
 - (e) ensuring that no at-grade intersections are provided in Pickering other than at Brock Road as an interim measure until Brock Road is realigned easterly and a full interchange can be constructed;
 - (f) accommodating a grade-separated crossing of Highway 407 at the existing Brock Road when the realigned Brock Road interchange is built; and
 - (g) providing for a realignment of Highway 7 around the hamlets of Green River and Brougham;
2. THAT Council request that the Ministry of Transportation consult with the Town during the detailed design phase of the Highway 407/Transitway extension to ensure the Town's position with respect to the above matters is adequately accommodated; and

3. THAT Planning Report No. 18/97 be forwarded to the Ministry of Environment and Energy, the Ministry of Transportation and the Region of Durham.

Please find enclosed Planning Report 18/97.

If you have any questions with respect to this matter, please do not hesitate to contact the Planning Department at 420-4617.

D. Keavns

for Bruce Taylor, AMCT, CMM
Town Clerk

/dk

c.c. Planning Department

ENCL - FORWARDED



117

REPORT TO COUNCIL

FROM: Neil Carroll
Director of Planning

MEETING DATE: June 23, 1997

PLANNING REPORT NO. 18/97

SUBJECT: Environmental Assessment Report -- Highway 407, Easterly Extension

RECOMMENDATION:

1. THAT Council advise the Ministry of Environment and Energy that it supports in principle the Highway 407/Transitway (Markham Road easterly to Highway 7, east of Brock Road) Environmental Assessment, on the understanding that the Town's position with respect to the following matters can be dealt with during the detailed design phase:
 - (a) protection for two interchanges in Seaton, but not located on either North Road or Sideline 24;
 - (b) ensuring that North Road and Sideline 24 are not dead-ended at their approach to Highway 407 (i.e. that grade-separations are provided);
 - (c) accommodating a continuous bikeway within or adjacent to the Highway 407/Transitway corridor;
 - (d) ensuring that within the Town of Pickering, Highway 407 is not opened until access is completed to Highway 7, east of Brock Road;
 - (e) ensuring that no at-grade intersections are provided in Pickering other than at Brock Road as an interim measure until Brock Road is realigned easterly and a full interchange can be constructed;
 - (f) accommodating a grade-separated crossing of Highway 407 at the existing Brock Road when the realigned Brock Road interchange is built; and
 - (g) providing for a realignment of Highway 7 around the hamlets of Green River and Brougham;
2. THAT Council request that the Ministry of Transportation consult with the Town during the detailed design phase of the Highway 407/Transitway extension to ensure the Town's position with respect to the above matters is adequately accommodated; and
3. THAT Planning Report No. 18/97 be forwarded to the Ministry of Environment and Energy, the Ministry of Transportation and the Region of Durham.

ORIGIN: Request from the Ministry of Environment and Energy for comments on the Highway 407/Transitway (Markham Road Easterly to Highway 7, east of Brock Road) Environmental Assessment

AUTHORITY: THE PLANNING ACT, R.S.O. 1990, chapter P.13

FINANCIAL IMPLICATIONS:

N/A

BACKGROUND:

On May 6, 1996, Town Council considered an Interdepartmental Development Team report on a Ministry of Transportation (MTO) feasibility study of the partial eastern extension of Highway 407. The MTO study was initiated due to concerns with the planned termination of Highway 407 at Markham Road in the Town of Markham, and the related impact of traffic congestion that may arise.

The Staff Report discussed MTO scenarios for the extension of Highway 407 through to various points in Pickering. Staff concluded that, in order to minimize impacts on the Town's rural communities, the extension should connect with Highway 7, east of Brock Road.

Council confirmed this position and adopted the following resolution (#114/96):

1. That Council request the Ministry of Transportation to proceed expeditiously with the planning and environmental assessment work relating to the construction of Highway 407, east from Markham Road to Highway 35/115, including the two links with Highway 401; and
2. That Council advise the Ministry of Transportation that it supports a partial extension of Highway 407, east from Markham Road to Brock Road by 1998 only if such extension continues east of Brock Road to join with Highway 7, with the provision of appropriate intersection signalization or partial interchange; and
3. That Council advise the Ministry of Transportation that it does not support any plan for the Partial Extension of Highway 407 east, which does not extend to Highway 7, east of Brock Road, including extension options to the Markham By-pass, the Townline Road and Brock Road; and
4. That any partial extension of Highway 407 east, include provision for the introduction of a continuous east/west bikeway route within the new Highway 407 corridor.

Following the completion of the feasibility study, MTO initiated an Environmental Assessment (EA) for the extension of Highway 407 to Highway 7, east of Brock Road. The EA was completed in April of this year, and submitted to the Ministry of Environment and Energy (MOEE) for approval. As a component of its review, MOEE is seeking comment on the EA from a number of stakeholders, including the Town of Pickering. The purpose of this Report is to provide these comments.

DISCUSSION:

The EA report illustrates the Technically Preferred Route for the extension of the Highway 407/Transitway corridor (see Attachment #1 to this Report). The 160 metre wide corridor is intended to ultimately accommodate 10 lanes of traffic, and an independent right-of-way for a Transitway (commuter bus, light rail, etc.). Also indicated are interchanges and grade separations (underpasses or overpasses).

Town staff were consulted by MTO during the preparation of the Environmental Assessment. Concerns that staff identified were resolved as the study evolved, and are noted here for Council's information.

Areas Protected for Interchanges

MTO was advised that interchanges should only be constructed at the Townline Road and a realigned Brock Road, and that two interchange locations should be protected in Seaton (with the locations determined through the completion of the Seaton Structure Plan, but not at North Road or Sideline 24). The final EA document protects and provides for interchanges as requested by the Town.

Areas Protected for Grade Separations

In an early draft of the EA, the Highway 407/Transitway corridor would have dead-ended all existing north-south roads between Townline Road and Brock Road. Staff voiced strong objections to this, citing concerns that severing these roads, particularly North Road and Sideline 24, would dramatically limit residents' ability to travel across this part of the Town, impair response time of emergency vehicles, and would likely place more traffic on Whitevale Road.

In response to our concerns, the final EA document was amended. All existing and continuous north/south roads in Pickering will be protected for either a grade separation or freeway interchange, including North Road and Sideline 24, which will be protected for grade separations.

Bikeway Route

As identified previously, Resolution #114/96 indicates the Town's desire for an east/west bikeway within the Highway 407 corridor, in accordance with the Town's Trails and Bikeway Master Plan. MTO staff have indicated that such a facility may not be easily accommodated within the corridor's right-of-way for safety reasons. However, they have advised that opportunities for providing a bikeway adjacent to the Highway 407 corridor are not precluded by the EA document. Council should continue to request that MTO make provision for accommodating a bikeway within or adjacent to the corridor.

Other Matters

In reviewing the Highway 407/Transitway Environmental Assessment, there are several other matters that warrant Council's attention. The first involves the Highway 407 project as a whole. While recognizing the benefit of a partial extension of Highway 407 into Pickering, the new highway will not truly function in its full capacity until it is completed to Highway 35/115. MTO should be encouraged to complete Highway 407 through Durham Region, or at the very least, through to a proper freeway connection with Highway 401 around Regional Road 23. This will reduce demand on arterial roads in Pickering.

Another matter involves the possible phasing or staging of the highway extension, which is dependent on financial constraints and travel demand. As set out in the EA document, the manner of staging the highway's development may include:

- (i) phasing of the 10 lanes over time in response to traffic demands, starting with 2 to 3 lanes each direction;
- (ii) opening of the highway to traffic as sections become available for use;
- (iii) staging of some interchanges and grade separations with at-grade intersections initially;
- (iv) staging of interchange ramps to initially restrict certain moves;
- (v) provision of an interim connection to Highway 7, east of Brock Road; and
- (vi) construction of the Transitway when demand warrants.

Certain of the above items are of concern to the Town, and must be addressed through the detailed design phase, should the EA be approved.

Interim Openings of Highway 407 Extension

Item (ii) suggests that, as Highway 407 is constructed from Markham Road to Highway 7, portions of it may be incrementally opened as it is built. Council is already on record as not supporting any plan for the partial eastern extension of Highway 407 which does not extend to Highway 7, east of Brock Road. If the extension is opened prior to reaching Highway 7, it may be to the detriment of the Town's rural communities, which is what Council is intending to avoid. Council should continue to oppose the opening of the Highway 407 extension until it is completed to Highway 7, east of Brock Road.

Interim At-Grade Intersections

Item (iii) of the possible highway staging suggests that some locations along Highway 407 that are protected for an interchange or grade separation might initially be served by conventional at-grade intersections. This again may be detrimental to the Town's rural communities, especially if at-grade intersections are provided at North Road and Sideline 24.

If in Pickering, Highway 407 is initially built with at-grade intersections, it would not truly operate as a freeway. Because of this, the Town would be subject to potential safety concerns, as well as possible negative impacts on rural communities as a result of additional traffic on local roads for an indefinite period of time. It is therefore desirable for Highway 407 to be built from the outset as a full-scale freeway with no at-grade intersections (except at Brock Road, until an easterly alignment can be built, and a full interchange can be provided).

Brock Road Realignment

The EA document indicates that Brock Road is protected for an interchange, but its location is conceptual only and subject to refinement. This allows the interchange to "float" to a realigned Brock Road, to the east of the Hamlet of Brougham. What becomes of the existing Brock Road is of interest to the Town. Council should request that through the detailed design phase, provision be made for the existing Brock Road to have a grade-separated crossing of Highway 407 in order to maintain adequate local access to and from the Hamlet of Brougham.

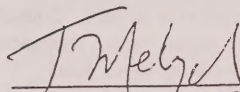
Highway 7 Realignment

The Council adopted Official Plan identifies realignments of Highway 7 around the hamlets of Green River and Brougham. The Province should ensure these realignments are provided for when it reconstructs Highway 7 in the vicinity of Townline Road (to accommodate a Highway 407 interchange at the Townline Road), and when an Highway 407 interchange is built in conjunction with the easterly realignment of Brock Road.

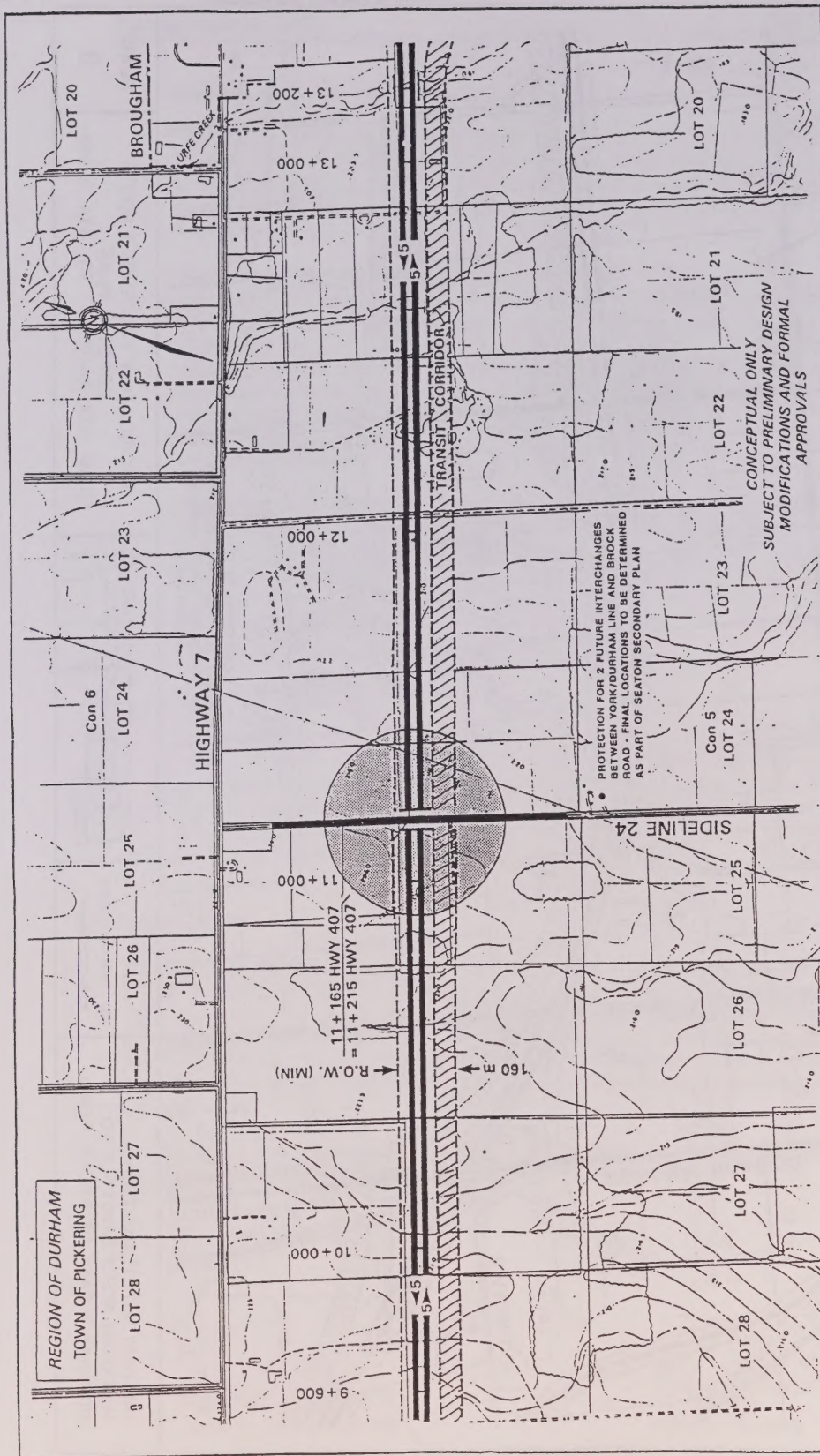
CONCLUSION:

The extension of Highway 407 into Pickering and Durham Region is supported by the Town. For the most part, the Highway 407/Transitway Environmental Assessment provides a logical framework for this work. There are, however, certain matters of concern to the Town that require further clarification through the detailed design phase. To ensure these items are dealt with in a suitable manner, Council should request MTO to continue to consult with the Town during the detailed design phase, in the event the Environmental Assessment is approved.

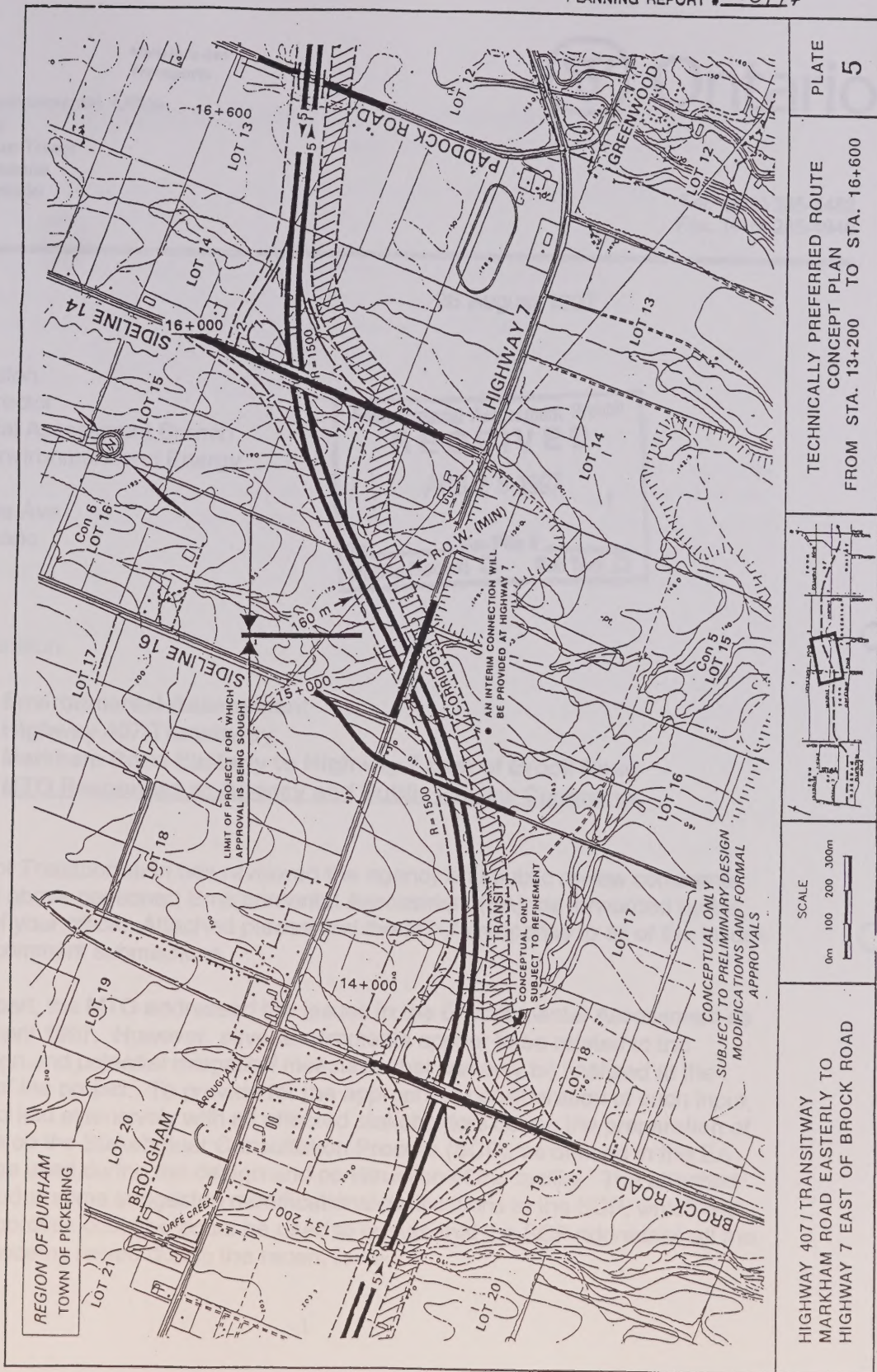
This Report has been discussed with the Town's Public Works and Parks & Facilities Departments, who concur with its contents.


Thomas E. Melymuk, M.C.I.P.
Deputy Director of Planning


Neil Carro
Director of Planning



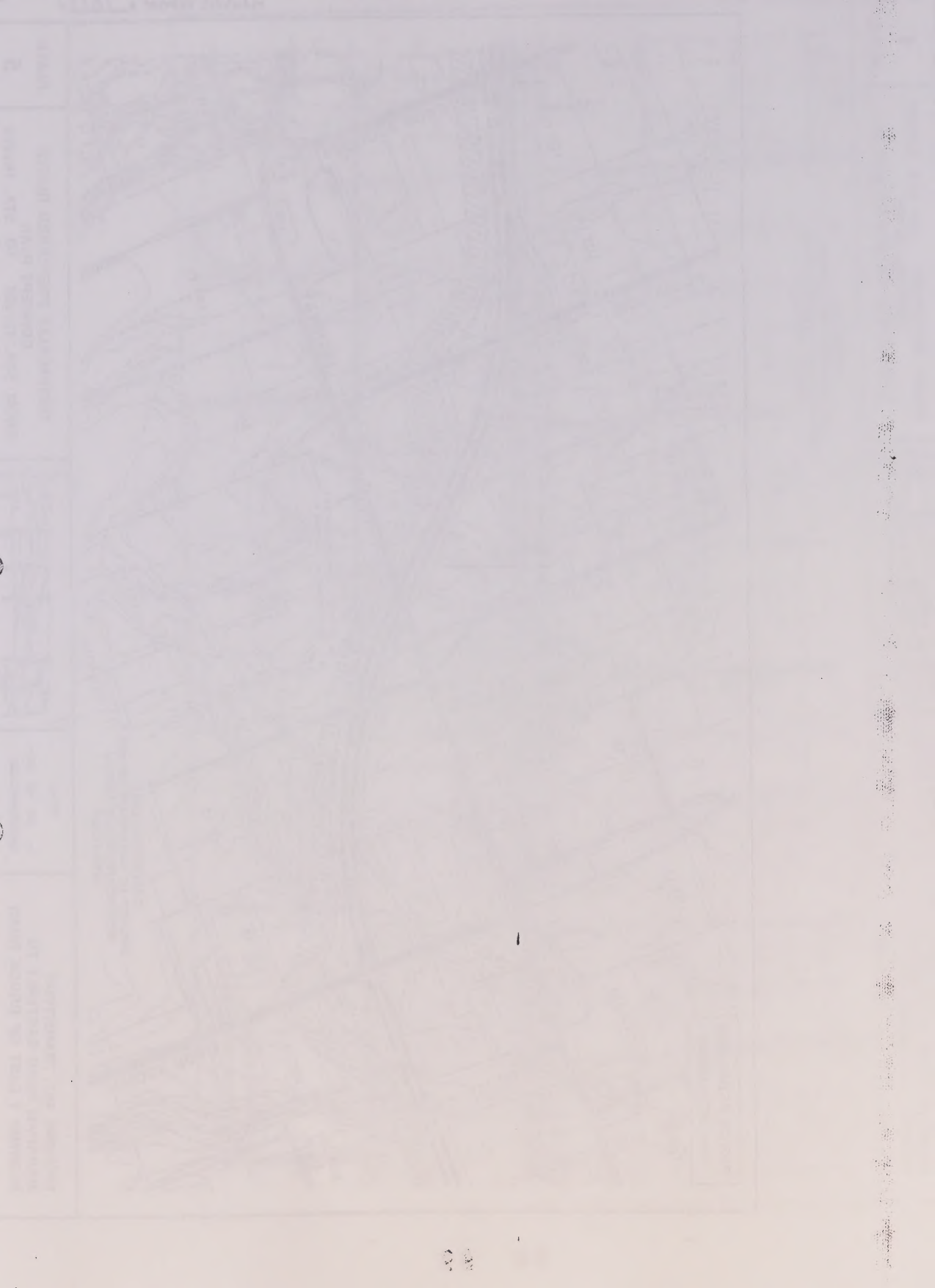
TECHNICALLY PREFERRED ROUTE CONCEPT PLAN FROM STA. 9+600 TO STA. 13+200		SCALE 0m 100 200 300m	HIGHWAY 407 / TRANSITWAY MARKHAM ROAD EASTERLY TO HIGHWAY 7 EAST OF BROCK ROAD
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HIGHWAY 407/TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

TECHNICALLY PREFERRED ROUTE
CONCEPT PLAN
FROM STA. 13+200 TO STA. 16+600

PLATE
5

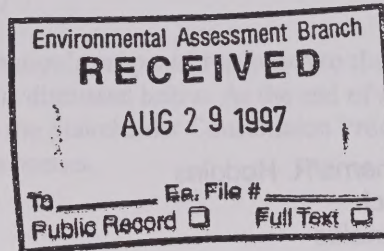


Planning & Environmental Office
Central Region
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1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Tel: (416) 235-5482
Fax: (416) 235-4940

26 August 1997

Ms. B. Johnston
Assistant Director
Environmental Assessment Branch
Ministry of Environment and Energy
5th Floor
250 Davisville Ave.
Toronto, Ontario
M4S 1H2



Dear Ms. Johnston:

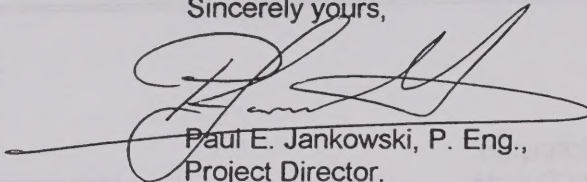
**Re: Environmental Assessment
Highway 407/Transitway
Markham Road Easterly to Highway 7 East of Brock Road
MTO Responses to Agency and Public Review Comments**

The Ministry of Transportation has reviewed the agency and public review comments relative to the above-captioned Environmental Assessment (EA), as forwarded by Mr. Nigel Wood of your office. Attached please find the MTO's response to all of the issues raised in the comment submissions.

For the most part, the MTO addressed the issues in the Environmental Assessment as submitted in April 1997. However, several comments appear to be related to the details of design and potential mitigation measures that can only be finalized at the design stage of the project. To provide for the appropriate consideration of such input, the ministry worked extensively with all affected stakeholders during the preparation of the EA to develop the Stakeholder Consultation Process (SCP), as defined in the EA document, to be used during the design and construction of the facility. The attached document includes some suggested modifications/clarifications to the SCP, which with the MOEE's approval, could be used to ensure that the SCP addresses all the appropriate concerns raised during the recent review.

I hope that the attached is of assistance. If you require any further information, or have any further questions, please contact me.

Sincerely yours,



Paul E. Jankowski, P. Eng.,
Project Director,
Highway 407 East

Attach.

cc: J. Sutherns/R. Hodgins
F. Leech
P. Reynolds

C:\DATA\HW\LETTERS\JANK\SCHEM.E
25 August 1997

Agency Comments on Highway 407/Transitway Environmental Assessment

A review of the comments received from the various agencies and the public indicate that the comments fall into four categories:

- 1) Observations requiring no action (i.e. no question asked/requests made);
- 2) Comments already covered by the Stakeholder Consultation Process (SCP);
- 3) Comments not covered by SCP but to be added to the SCP; and
- 4) Comments outside of the scope of the project (g. Global impacts) or not covered by SCP but MTO is not prepared to commit to.

The following addresses the Ministry of Transportation's proposed responses to the review comments. Each agency that provided comments is discussed below. At the end of the discussion of agency comments are the proposed changes to the Stakeholder Consultation Process to which the MTO is prepared to commit to address new concerns.

FEDERAL AGENCIES

Canadian Transportation Agency

No major concerns have been raised. MTO is aware of the need to involve CTA if it cannot resolve discussions with the railway company, and the potential to trigger CEAA. No action is necessary by MTO or MOEE at this time.

Department of Fisheries and Oceans (DFO)

Most of the points raised are covered or will be covered through the Stakeholder Consultation Process (SCP), or will come during the design phase (i.e. specifics if Fisheries Act Authorizations are required). The SCP has always been intended to deal with both the highway and the transitway. Stormwater and drainage discussions will deal with the ultimate facility requirements.

Specific changes to SCP are proposed to address the following points raised by DFO:

- Control of entry of petroleum products, etc. into watercourses;
- Instream construction in the dry;
- Need for restoration plans;
- Having ponds off-line from streams.

The only comment that cannot be addressed is the request that future lane expansions allow for openings between the structures for light penetration. This would require significant realignment of the roadway with increased ROW causing unacceptable adverse effects at, and beyond the crossings. The issue of light penetration and potential for mitigation, if required, will be discussed as part of the SCP.

Environment Canada (DOE)

Most of DOE's comments are accommodated in the SCP. The SCP commits to using native species (Pg 10 - Wildlife & Corridors), and discusses the provision of opportunities to salvage seed sources (Pg 10 - Vegetation). Opportunities for use of native species, protection of seed sources and use of small demonstration plots can be reviewed as part of the SCP. No changes to the EA as submitted are required to allow for this.

DOE's comments regarding topsoil salvage are noted, however it is not possible to provide an absolute commitment to minimizing stockpile heights. There may be physical and economic constraints that prohibit this practice. The SCP does allow for further review of other opportunities for topsoil salvage and protection of seed sources. This desire to minimize stockpile heights will be stated as an objective for consideration during the development of future design, contract preparation and construction.

PROVINCIAL AGENCIES

Ministry of Environment & Energy (MOEE)

MOEE's requirement for submission of the Design and Construction (D&C) Reports for review and **Approval**, 90 days in advance of construction is not compatible with the negotiated review and approval requirements for this undertaking. As was the case during the course of the EA Study, there is a commitment to involve MOEE throughout the design and construction phases as part of the SCP. This is the mechanism for ensuring that MOEE's concerns are addressed. The review of the D&C Reports will provide the opportunity for confirmation of agreements reached during the SCP. Therefore a minimum 30 day review and comment period should be sufficient. If there is sufficient time in the design and construction schedule to allow a longer review period, this will be provided. This EA submission is the mechanism to address agency concerns and address formal approval requirements under the EA Act. The imposition of additional approvals at the design stage that do not already constitute a legislated requirement is unnecessary.

Changes are proposed to the SCP to address the following comments:

- Consultation on the method of assessment of noise impacts from the transitway and ancillary facilities;
- Noise-related content of the Design and Construction Reports.

Ministry of Natural Resources (MNR)

The majority of the comments made by MNR are reiteration of comments raised during consultation on the EA. They are reflected in the SCP and can be adequately addressed through the negotiated process. The SCP applies to both the roadway and the transitway, and the impacts

Agency Comments on Highway 407/Transitway Environmental Assessment

will be addressed through the SCP. The design of stormwater management and drainage features will be for the ultimate facility. No physical changes to Highway 7 east of the temporary termination of Highway 407 east of Brougham are proposed by MTO.

With regard to the remaining MNR comments:

- Existing hydrogeological information was considered as it relates to route planning/selection. No additional hydrogeological studies are currently planned. Any existing hydrogeological information will be further considered as part of the SCP. If during the design phase additional site-specific hydrogeological data is determined to be needed, further study will be carried out.
- The requirement for future lane expansions to allow for openings between the structures for light penetration. This would require significant realignment of the roadway with increased ROW, causing unacceptable adverse effects at, and beyond the crossings. The issue of light penetration and potential for mitigation, if required, will be discussed as part of the SCP.

The following change will be made to the SCP:

- The 5th bullet on Pg 7 of the SCP referring to the term “bank-full”, will be replaced to reflect the requirements in MTRCA’s guidelines.

MTRCA/Rouge Park Alliance

Most of the comments have been or can be addressed through the SCP as currently drafted. The SCP does include the transitway. The design of stormwater management facilities and drainage for the ultimate facility will be addressed during the SCP.

The modifications to Hwy 7 that are required as part of the undertaking have been addressed in the EA. Modifications to the N/S roadways, if identified through municipal planning processes, should be addressed through those plans.

Both MNR and MTRCA raised a question about the comments in the EA about the negative effects of natural corridors. They have suggested that what the EA meant to address were the negative effects of Transportation Corridors. The EA is correct the way it is written. There are negative effects of re-establishing natural corridors (e.g. disease transmission, dispersal of undesirable species, increased predatory risk) that are not always recognized by agency staff, that should be considered when discussing the merits of establishing natural corridors.

As is the case with any new designation, the recent expansion of the defined boundary for the Whitevale ESA will be considered during the design phase as part of the SCP. However, it must

Agency Comments on Highway 407/Transitway Environmental Assessment

be understood that this expansion of the Whitevale ESA boundary came to light after the Highway 407 alignment was set and agreed to. The route was selected through an extensive planning process that assessed the environmental sensitivities in the area and other constraints and controls which remain unchanged, therefore an alignment shifts is not warranted by the redefinition of the boundary. However, the SCP does allow for discussion of how best to design and construct the Highway 407/Transitway in this area, and all other sensitive areas.

There have been concerns expressed that Table 6.6.1 in the EA gives the impression that stormwater management and erosion control will only be considered for the major crossings. Table 6.6.1 indicates that these will be considered for **"The Entire Route"**. The requirement is reiterated for major crossing, but has not been reiterated for the minor crossings. This reinforces the importance of these issues for major crossings but does not diminish the intent that they apply to all crossings.

There has also been a concern expressed that the statement in Table 6.6.1 *"bridge will be used to cross the Rouge River thereby minimizing disruption to the vegetation in the valley..."* does not recognize that the valley may need to be spanned and not just the river. It was the intent to recognize the importance of the valley system and that consideration will need to be given to spanning the valley. This will be addressed as part of the SCP. It is also noted that there are typographical errors in Table 6.6.1. The above italicized statement has been repeated for each of the major river crossings but the name of the watercourse was not changed. This will be corrected.

The following comments will be addressed through changes to the SCP:

- Regarding monitoring, MTO proposes to require environmental inspectors on site during critical construction periods. The monitoring program will be developed through the SCP.
- The 5th bullet on page 7 of the SCP has been replaced with the provisions of MTRCA's guideline as suggested in their comments

PROPOSED CHANGES TO THE STAKEHOLDER CONSULTATION PROCESS

MTO is prepared to make the following changes to the Stakeholder Consultation Process to address the concerns raised by the agencies.

Aquatic Resources

Watercourse Crossings

The following commitments are to be added to Page 7 of the SCP:

Agency Comments on Highway 407/Transitway Environmental Assessment

- Control all construction activities in such a manner as to prevent the entry of petroleum products, rubble, concrete and other debris into the watercourses. Conduct all vehicular maintenance and refuelling activities away from watercourses and watercourse banks.
- Where feasible, instream construction will be carried out in the dry.
- Rehabilitation plans for construction sites will be developed in consultation with stakeholder agencies.

The following commitment "*Avoid the placement of piers within the watercourse channel under bankfull flow conditions*" on Page 7 of the SPC will be replaced with:

- Where possible, structural abutments and piers will be located outside of the regulatory flood plain to minimize obstruction to water flow. If it becomes necessary to construct abutments or piers within the floodplain, they will be designed to minimize any impact on flood conveyance or upstream flood elevations.
- Bridge and culvert openings will be designed for the 100 year and 50 year design storm criteria respectively, as per the MTO's "Design Flood Criteria" standards and policy (Directive B-100). Impacts of the regional storm will also be assessed, and appropriate mitigation measures developed in consultation with affected stakeholders.
- Environmental inspectors will be on-site during critical construction periods.

Stormwater Management

The following commitments are to be added to Page 9 of the SCP:

- Stormwater management facilities will be constructed off-line of watercourses.

Noise

The following commitments are to be added to Page 11 of the SCP:

- Consult with the Noise Assessment Unit of the MOEE during the design phase to determine the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit stations, the maintenance/storage yards and the commuter parking lots.
- The noise component of design and construction reports submitted for review and comment will include an assessment of operational noise impacts, measures to minimize noise and vibration, and the likely effectiveness of these

MUNICIPALITIES

Regional Municipality of Durham

The Region of Durham has requested a by-pass of Green River. This by-pass is not required to implement the Highway 407/Transitway undertaking.

Town of Whitby

The traffic analysis conducted for Hwy 407/Transitway included all arterial roads within the Region of Durham including the Town of Whitby. The analysis demonstrates that the extension of Hwy 407 to Brock Road will have imperceptible effects on traffic volumes on Hwy 7 in the vicinity of Brooklin, and will increase traffic on Hwy 7 west of Hwy 12 (at the 1998 planning horizon) by only 7% westbound (40 vehicles per hour increase) and 1% eastbound (10 vehicles per hour increase) in the a.m. peak period. These increases are within the normal day-to-day fluctuations that can occur now with variations in conditions on Hwy 401. Similar conditions/impacts will be experienced on other roadways in the Town of Whitby. Given this, improvements to Hwy 7 east of Brock Road and roadway network improvements in the vicinity of Brooklin are not warranted at this time.

THE PUBLIC

The public comments fall generally into 5 categories:

- 1) Those who question the need for the highway
- 2) Those who question the use of a highway rather than alternatives such as transit and TDM
- 3) Those who have concerns about the environmental impacts of the Highway/Transitway
- 4) Those who have concerns about the urban sprawl effects and loss of farmland
- 5) Those who are concerned with the timetable for review

The following responses are provided for these comments:

1) Those who question the need for the highway

The need for Highway 407 has been documented in Chapter 2 of the EA. There is a clear need for additional road and transit capacity within the Highway 7 corridor east of Markham Road. The EA also demonstrates that there are limited opportunities for meeting this need through additional arterial capacity, local transit improvements and TDM measures alone.

2) Those who question the use of a highway rather than alternatives such as transit and TDM

Chapter 3 of the EA discusses alternatives to the undertaking and demonstrates that the solution to the long-term transportation needs in this corridor include road improvements, transit improvements and TDM improvements. No one type of improvement will solve the demonstrated problems. Definitely, the travel demand cannot be met without the extension of Highway 407.

3) Those who have concerns about the environmental impacts of the Highway/Transitway

Extensive studies (see Chapter 4) have been carried out to identify and address the environmental issues. The Route Planning Phase as documented in Chapter 5 of the EA shows the lengths taken to avoid environmental impacts through the selection of a technically preferred route. The environmental effects will be further minimized through the commitment to a design and construction process that involves the regulatory agencies in an unprecedented fashion. The use of a Watercourse Assessment Process for establishing the environmental protection principles that will govern the design process is unique and will ensure that environmental protection is achieved. The commitment to ongoing involvement of agencies in the design and throughout construction will further opportunities for environmental protection.

4) Those who have concerns about the urban sprawl effects and loss of farm land

The future land use form of the area has been established through approved Municipal Land Use Plans and provincial planning policies. The Highway 407 is a component of those plans. It is not appropriate to challenge approved planning directions through infrastructure projects. OMAFRA has been consulted during the EA Study and has agreed with the Hwy 407/Transitway route location and selection process and results.

5) Those who are concerned with the timetable for review

The planning of the highway/transitway has been on-going since 1989. The public and other stakeholders have had many opportunities for direct involvement in the study since that time. The EA currently under review has been available for review and comment through municipal libraries and municipal clerks' offices since mid-April, 1997.



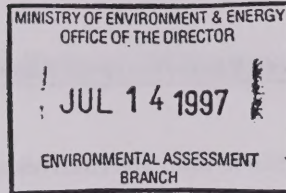
The Corporation
of the
Town of Pickering

Councillor's Office

Pickering Civic Complex
One the Esplanade
Pickering, Ontario
Canada
L1V 6K7

Direct
Tel. (905) 420-4405
(905) 420-4044

Town
Tel. (905) 420-2222
(905) 483-3740
Fax (905) 420-0515



July 2, 1997

Hon. Norman W. Sterling, Minister
Ministry of the Environment and Energy,
12th Floor, 56 Wellesley St. W.,
Toronto, Ontario
M7A 2B7

JUL 08 1997

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CCU

For Min Response

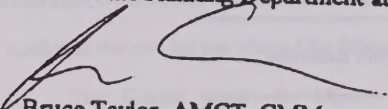
Please be advised that the Council of the Town of Pickering passed the following resolution at its meeting of June 23rd, 1997:

1. THAT Council advise the Ministry of Environment and Energy that it supports in principle the Highway 407/Transitway (Markham Road easterly to Highway 7, east of Brock Road) Environmental Assessment, on the understanding that the Town's position with respect to the following matters can be dealt with during the detailed design phase:
 - (a) protection for two interchanges in Seaton, but not located on either North Road or Sideline 24;
 - (b) ensuring that North Road and Sideline 24 are not dead-ended at their approach to Highway 407 (i.e. that grade-separations are provided);
 - (c) accommodating a continuous bikeway within or adjacent to the Highway 407/Transitway corridor;
 - (d) ensuring that within the Town of Pickering, Highway 407 is open with access completed to Highway 7, east of Brock Road;
 - (e) ensuring that no at-grade intersections are provided in Pickering other than at Brock Road as an interim measure until Brock Road is realigned easterly and a full interchange can be constructed;
 - (f) accommodating a grade-separated crossing of Highway 407 at the existing Brock Road when the realigned Brock Road interchange is built; and
 - (g) providing for a realignment of Highway 7 around the hamlets of Green River and Brougham;
2. THAT Council request that the Ministry of Transportation consult with the Town during the detailed design phase of the Highway 407/Transitway extension to ensure the Town's position with respect to the above matters is adequately accommodated; and

3. THAT Planning Report No. 18/97 be forwarded to the Ministry of Environment and Energy, the Ministry of Transportation and the Region of Durham.

Please find enclosed Planning Report 18/97.

If you have any questions with respect to this matter, please do not hesitate to contact the Planning Department at 420-4617.



Bruce Taylor, AMCT, CMM
Town Clerk

/dk

c.c. Planning Department



REPORT TO COUNCIL

FROM: Neil Carroll
Director of Planning

MEETING DATE: June 23, 1997

PLANNING REPORT NO. 18/97

SUBJECT: Environmental Assessment Report – Highway 407, Easterly Extension

RECOMMENDATION:

1. THAT Council advise the Ministry of Environment and Energy that it supports in principle the Highway 407/Transitway (Markham Road easterly to Highway 7, east of Brock Road) Environmental Assessment, on the understanding that the Town's position with respect to the following matters can be dealt with during the detailed design phase:
 - (a) protection for two interchanges in Seaton, but not located on either North Road or Sideline 24;
 - (b) ensuring that North Road and Sideline 24 are not dead-ended at their approach to Highway 407 (i.e. that grade-separations are provided);
 - (c) accommodating a continuous bikeway within or adjacent to the Highway 407/Transitway corridor;
 - (d) ensuring that within the Town of Pickering, Highway 407 is not opened until access is completed to Highway 7, east of Brock Road;
 - (e) ensuring that no at-grade intersections are provided in Pickering other than at Brock Road as an interim measure until Brock Road is realigned easterly and a full interchange can be constructed;
 - (f) accommodating a grade-separated crossing of Highway 407 at the existing Brock Road when the realigned Brock Road interchange is built; and
 - (g) providing for a realignment of Highway 7 around the hamlets of Green River and Brougham;
 2. THAT Council request that the Ministry of Transportation consult with the Town during the detailed design phase of the Highway 407/Transitway extension to ensure the Town's position with respect to the above matters is adequately accommodated; and
 3. THAT Planning Report No. 18/97 be forwarded to the Ministry of Environment and Energy, the Ministry of Transportation and the Region of Durham.
-

ORIGIN: Request from the Ministry of Environment and Energy for comments on the Highway 407/Transitway (Markham Road Easterly to Highway 7, east of Brock Road) Environmental Assessment

AUTHORITY: THE PLANNING ACT, R.S.O. 1990, chapter P.13

FINANCIAL IMPLICATIONS:

N/A

BACKGROUND:

On May 6, 1996, Town Council considered an Interdepartmental Development Team report on a Ministry of Transportation (MTO) feasibility study of the partial eastern extension of Highway 407. The MTO study was initiated due to concerns with the planned termination of Highway 407 at Markham Road in the Town of Markham, and the related impact of traffic congestion that may arise.

The Staff Report discussed MTO scenarios for the extension of Highway 407 through to various points in Pickering. Staff concluded that, in order to minimize impacts on the Town's rural communities, the extension should connect with Highway 7, east of Brock Road.

Council confirmed this position and adopted the following resolution (#114/96):

1. That Council request the Ministry of Transportation to proceed expeditiously with the planning and environmental assessment work relating to the construction of Highway 407, east from Markham Road to Highway 35/115, including the two links with Highway 401; and
2. That Council advise the Ministry of Transportation that it supports a partial extension of Highway 407, east from Markham Road to Brock Road by 1998 only if such extension continues east of Brock Road to join with Highway 7, with the provision of appropriate intersection signalization or partial interchange; and
3. That Council advise the Ministry of Transportation that it does not support any plan for the Partial Extension of Highway 407 east, which does not extend to Highway 7, east of Brock Road, including extension options to the Markham By-pass, the Townline Road and Brock Road; and
4. That any partial extension of Highway 407 east, include provision for the introduction of a continuous east/west bikeway route within the new Highway 407 corridor.

Following the completion of the feasibility study, MTO initiated an Environmental Assessment (EA) for the extension of Highway 407 to Highway 7, east of Brock Road. The EA was completed in April of this year, and submitted to the Ministry of Environment and Energy (MOEE) for approval. As a component of its review, MOEE is seeking comment on the EA from a number of stakeholders, including the Town of Pickering. The purpose of this Report is to provide these comments.

DISCUSSION:

The EA report illustrates the Technically Preferred Route for the extension of the Highway 407/Transitway corridor (see Attachment #1 to this Report). The 160 metre wide corridor is intended to ultimately accommodate 10 lanes of traffic, and an independent right-of-way for a Transitway (commuter bus, light rail, etc.). Also indicated are interchanges and grade separations (underpasses or overpasses).

Town staff were consulted by MTO during the preparation of the Environmental Assessment. Concerns that staff identified were resolved as the study evolved, and are noted here for Council's information.

Areas Protected for Interchanges

MTO was advised that interchanges should only be constructed at the Townline Road and a realigned Brock Road, and that two interchange locations should be protected in Seaton (with the locations determined through the completion of the Seaton Structure Plan, but not at North Road or Sideline 24). The final EA document protects and provides for interchanges as requested by the Town.

Areas Protected for Grade Separations

In an early draft of the EA, the Highway 407/Transitway corridor would have dead-ended all existing north-south roads between Townline Road and Brock Road. Staff voiced strong objections to this, citing concerns that severing these roads, particularly North Road and Sideline 24, would dramatically limit residents' ability to travel across this part of the Town, impair response time of emergency vehicles, and would likely place more traffic on Whitevale Road.

In response to our concerns, the final EA document was amended. All existing and continuous north/south roads in Pickering will be protected for either a grade separation or freeway interchange, including North Road and Sideline 24, which will be protected for grade separations.

Bikeway Route

As identified previously, Resolution #114/96 indicates the Town's desire for an east-west bikeway within the Highway 407 corridor, in accordance with the Town's Trails and Bikeway Master Plan. MTO staff have indicated that such a facility may not be easily accommodated within the corridor's right-of-way for safety reasons. However, they have advised that opportunities for providing a bikeway adjacent to the Highway 407 corridor are not precluded by the EA document. Council should continue to request that MTO make provision for accommodating a bikeway within or adjacent to the corridor.

Other Matters

In reviewing the Highway 407/Transitway Environmental Assessment, there are several other matters that warrant Council's attention. The first involves the Highway 407 project as a whole. While recognizing the benefit of a partial extension of Highway 407 into Pickering, the new highway will not truly function in its full capacity until it is completed to Highway 35/115. MTO should be encouraged to complete Highway 407 through Durham Region, or at the very least, through to a proper freeway connection with Highway 401 around Regional Road 23. This will reduce demand on arterial roads in Pickering.

Another matter involves the possible phasing or staging of the highway extension, which is dependent on financial constraints and travel demand. As set out in the EA document, the manner of staging the highway's development may include:

- (i) phasing of the 10 lanes over time in response to traffic demands, starting with 2 to 3 lanes each direction;
- (ii) opening of the highway to traffic as sections become available for use;
- (iii) staging of some interchanges and grade separations with at-grade intersections initially;
- (iv) staging of interchange ramps to initially restrict certain moves;
- (v) provision of an interim connection to Highway 7, east of Brock Road; and
- (vi) construction of the Transitway when demand warrants.

Certain of the above items are of concern to the Town, and must be addressed through the detailed design phase, should the EA be approved.

Interim Openings of Highway 407 Extension

Item (ii) suggests that, as Highway 407 is constructed from Markham Road to Highway 7, portions of it may be incrementally opened as it is built. Council is already on record as not supporting any plan for the partial eastern extension of Highway 407 which does not extend to Highway 7, east of Brock Road. If the extension is opened prior to reaching Highway 7, it may be to the detriment of the Town's rural communities, which is what Council is intending to avoid. Council should continue to oppose the opening of the Highway 407 extension until it is completed to Highway 7, east of Brock Road.

Interim At-Grade Intersections

Item (iii) of the possible highway staging suggests that some locations along Highway 407 that are protected for an interchange or grade separation might initially be served by conventional at-grade intersections. This again may be detrimental to the Town's rural communities, especially if at-grade intersections are provided at North Road and Sideline 24.

If in Pickering, Highway 407 is initially built with at-grade intersections, it would not truly operate as a freeway. Because of this, the Town would be subject to potential safety concerns, as well as possible negative impacts on rural communities as a result of additional traffic on local roads for an indefinite period of time. It is therefore desirable for Highway 407 to be built from the outset as a full-scale freeway with no at-grade intersections (except at Brock Road, until an easterly alignment can be built, and a full interchange can be provided).

Brock Road Realignment

The EA document indicates that Brock Road is protected for an interchange, but its location is conceptual only and subject to refinement. This allows the interchange to "float" to a realigned Brock Road, to the east of the Hamlet of Brougham. What becomes of the existing Brock Road is of interest to the Town. Council should request that through the detailed design phase, provision be made for the existing Brock Road to have a grade-separated crossing of Highway 407 in order to maintain adequate local access to and from the Hamlet of Brougham.

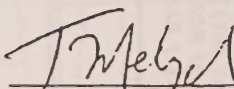
Highway 7 Realignment

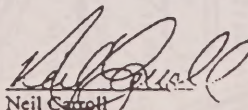
The Council adopted Official Plan identifies realignments of Highway 7 around the hamlets of Green River and Brougham. The Province should ensure these realignments are provided for when it reconstructs Highway 7 in the vicinity of Townline Road (to accommodate a Highway 407 interchange at the Townline Road), and when an Highway 407 interchange is built in conjunction with the easterly realignment of Brock Road.

CONCLUSION:

The extension of Highway 407 into Pickering and Durham Region is supported by the Town. For the most part, the Highway 407/Transitway Environmental Assessment provides a logical framework for this work. There are, however, certain matters of concern to the Town that require further clarification through the detailed design phase. To ensure these items are dealt with in a suitable manner, Council should request MTO to continue to consult with the Town during the detailed design phase, in the event the Environmental Assessment is approved.

This Report has been discussed with the Town's Public Works and Parks & Facilities Departments, who concur with its contents.


Thomas E. Melnyk, M.C.I.P.
Deputy Director of Planning


Neil Carroll
Director of Planning

GM/bo:c

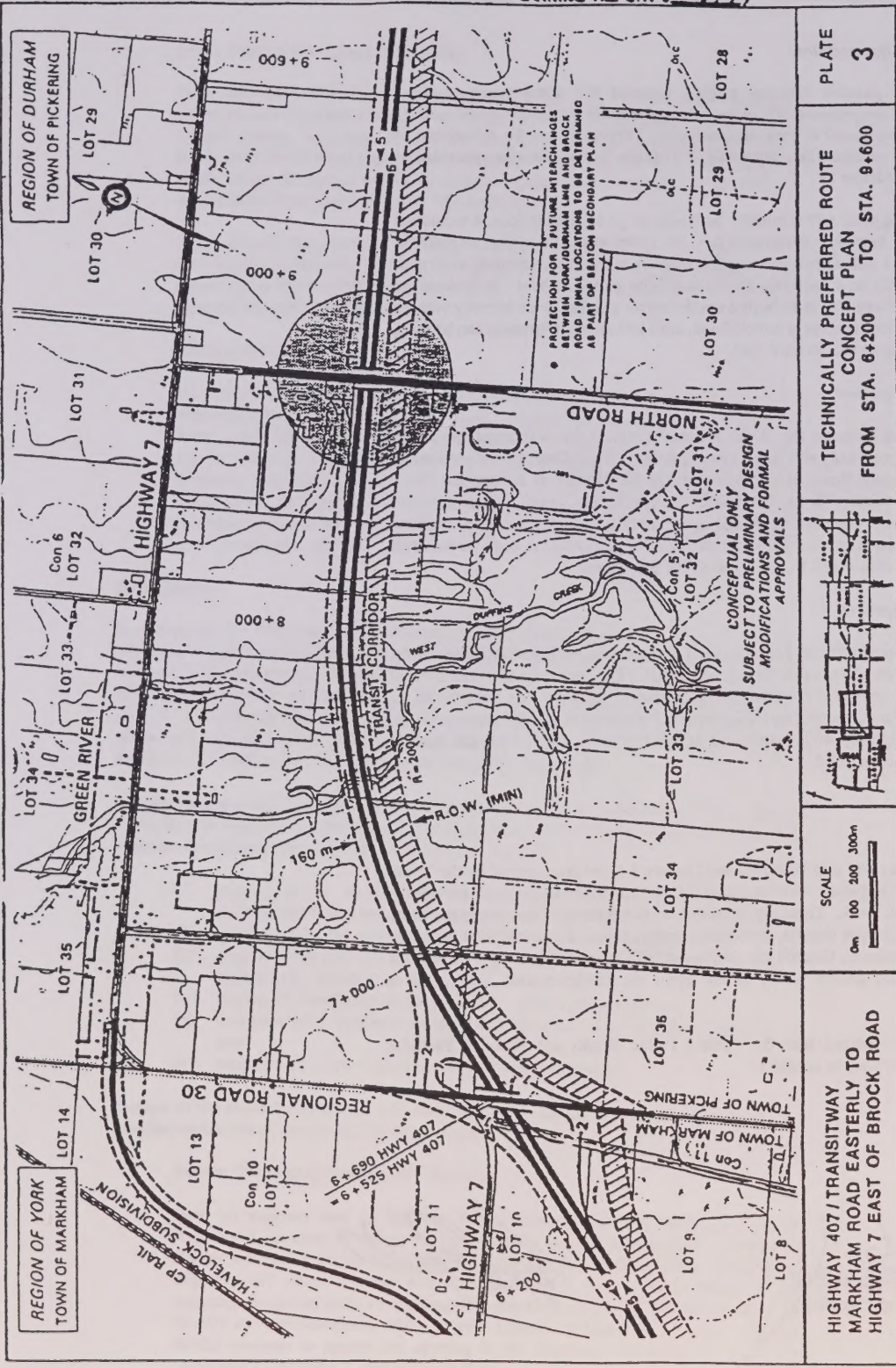
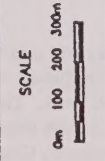
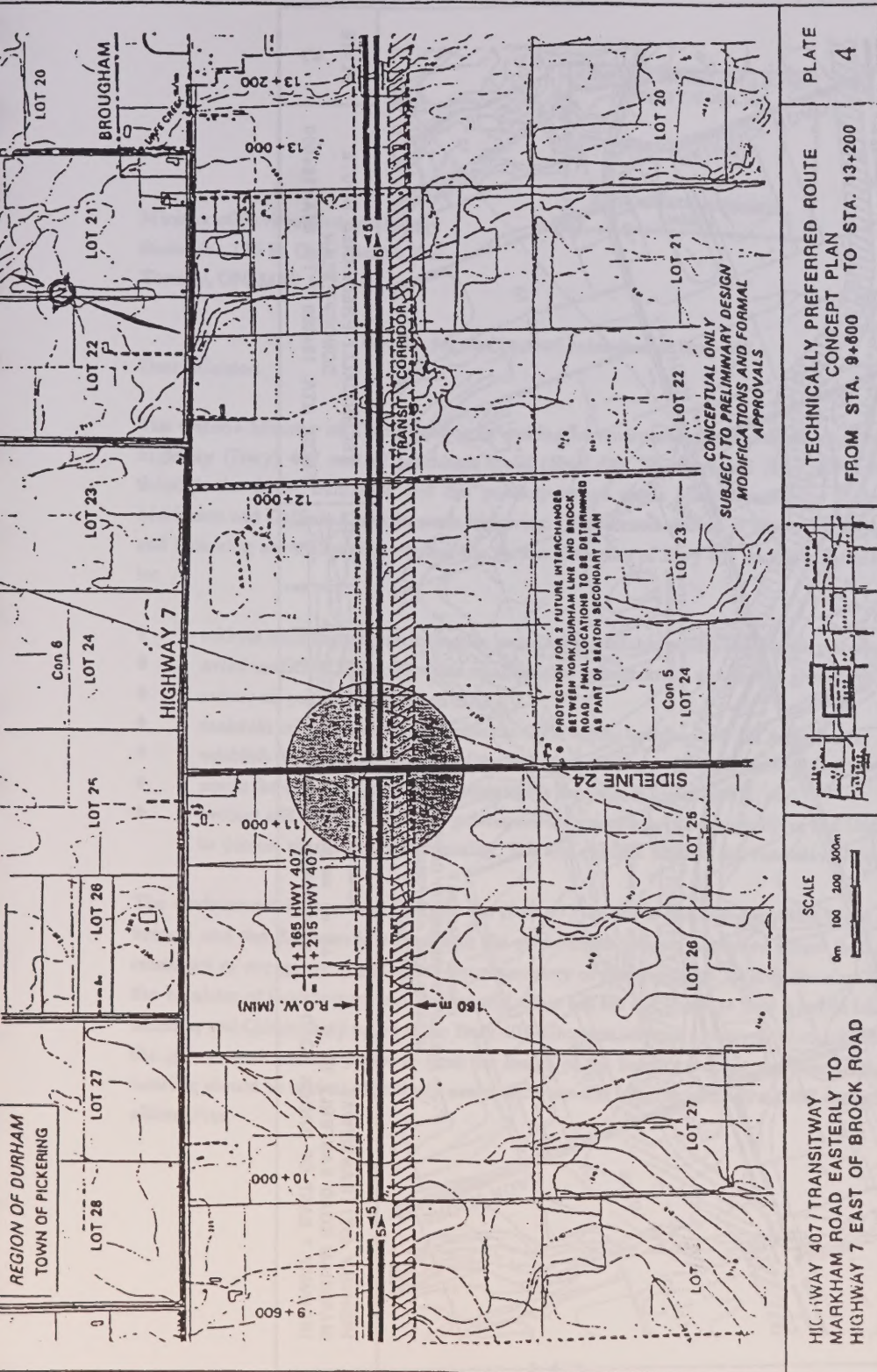


PLATE
3

TECHNICALLY PREFERRED ROUTE
CONCEPT PLAN
FROM STA. 6+200 TO STA. 9+600

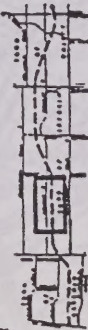


HIGHWAY 407/TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD



TECHNICALLY PREFERRED ROUTE
CONCEPT PLAN
FROM STA. 9+600 TO STA. 13+200

PLATE
4

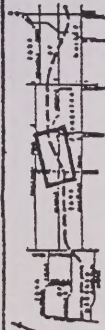
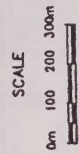


SCALE
0m 100 200 300m

HIGHWAY 407/TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

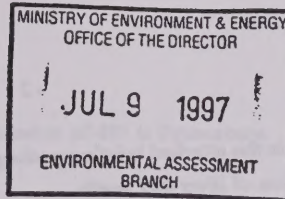


HIGHWAY 407/TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD



TECHNICALLY PREFERRED ROUTE
CONCEPT PLAN
FROM STA. 13+200 TO STA. 16+600

PLATE
5



July 2, 1997

Minister of Environment and Energy
Suite 100, 135 St. Clair Avenue East
Toronto, ON, M4V 1P5

Re: EA for the further extension of Hwy 407

58959

Dear Minister:

The Ontario Ministry of Transportation is seeking an environmental assessment approval to extend highway (Hwy) 407 east of Markham Road (Hwy 48). The proposed Hwy 407 extension cuts through the fertile farmlands and the publicly-owned green space around the Rouge River in Markham and Duffin's Creek in north Pickering. Concerned citizens in Metro-Toronto, Markham and Pickering are challenging whether the further extension of Hwy 407 makes sense given the need to:

- ♦ address other higher priority public issues with available public and private resources;
- ♦ avoid inefficient urban form and unaffordable infrastructure and service growth;
- ♦ reduce air pollution and urban decay;
- ♦ maintain existing highways outside the GTA before building new GTA highways;
- ♦ establish the financial viability of the first phase of Hwy 407 before proceeding further;
- ♦ assess the effect of the improvements to the capacity of highway 401; and,
- ♦ protect and expand the public greenspace system around the Rouge River and Duffin's Creek to protect air quality, water quality, fish and wildlife habitat, and recreational opportunities.

The environmental assessment (EA) for the Hwy 407 extension has been submitted to the MOEE EA branch and the EA branch is finalizing the government review. Attached please find a two-page summary of our concerns and a four-page summary of our questions. Within the next few months, the Minister of Environment and Energy will either ask the EA Board to hold a public hearing or the Minister and Cabinet may approve the Hwy 407 extension without a hearing. Under the new *EA Act*, the government has the power to limit the length of the hearing process, therefore, a short public hearing should be held to objectively assess the costs and benefits of the Hwy 407 extension and the alternatives.

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For the reasons stated in the attached briefing package, we believe that no decision should be made on the further extension of Hwy 407 until:

- ♦ the GTA Services Board has completed an objective and effective traffic-demand-management and transit strategy for the GTA;
- ♦ the Environmental Assessment Board has held a short hearing on the proposed Hwy 407 extension to receive public input;
- ♦ the widening of Hwy 401 is completed and the effect on east-west traffic flow is assessed;
- ♦ the financial viability of the first phase of Hwy 407 is reasonably established; and,
- ♦ the province has dedicated 3,000 additional hectares of publicly-held tablelands to the Rouge River Park. Reforestation/naturalization of the 3,000 hectares will protect and link the Rouge River Park, Petticoat Creek and Duffin's Creek green space systems while addressing regional objectives for forest cover, air quality, water quality, flood control, fish and wildlife habitat, foodland and recreation.

Please read the attached briefing package and the questions submitted to the EA Branch. Please help us to get complete responses to our questions and please let us know where you stand on the concerns and pre-requisites we have outlined.

Sincerely,

Jim Robb
1 Bracburn Blvd
Scarborough, Ontario
M1J 2P9

Kevin O'Connor
6 Plover Road
Scarborough, Ontario
M1G 3C9

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- 3 -

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Reasons Why the Extension of 407 is Premature

A Question of Priorities

Hwy 407 has already cost almost \$1 billion dollars of taxpayer/government financial backing. At a time when hospitals are closing and provincial budgetary cut-backs are taking effect, the government should not approve or finance the costly extension of Hwy 407, particularly when the financial viability of the first phase of Hwy 407 is unproven. The public may view the premature approval of Hwy 407 as a project which supports the plans of land speculators/developers at the expense of GTA residents and Ontario taxpayers.

Avoid Subsidizing Unaffordable Infrastructure and Urban Decay

Extending Hwy 407 into the farmlands of the Rouge River and Duffin's Creek will increase taxes by subsidizing inefficient infrastructure growth and escalating service and infrastructure maintenance costs. Rural/suburban highways also subsidize long-distance commuters who utilize the services and infrastructure of the central city (Toronto) without contributing to the financing of these services through property taxes. Many USA cities have already found that highway-supported suburban sprawl leads to unaffordable infrastructure, escalating pollution and traffic congestion and decay of the urban core.

Avoid Air Pollution that Hurts Provincial Taxpayers Directly and Indirectly

If scarce resources are spent on the extension of Hwy 407, instead of on better traffic control and transit, the provincial government will be subsidizing further addition to the private automobile and further air pollution. Environment Canada (1991) reports that long-distance commuting and automobile use are significant contributors to pollution, particularly in urban areas. There is growing medical evidence that auto exhaust and smog are causing lung and heart damage and increasing health care costs. Urban smog is a suspected trigger of serious asthma and respiratory problems, particularly in children and the elderly, and hospital records confirm that admissions and deaths increase in the GTA during smog conditions. Auto emissions also produce and trap heat within the atmosphere providing more energy to drive climatic extremes. Climatic extremes are increasing flooding, property damage, crop failure, forest fires, famine, disease and health care costs. Our wallets are already feeling the pinch through increased food costs, insurance rates, forest fire costs, disaster-relief funding and refugee pressures from disaster areas.

...4

Avoid Air Pollution that Hurts Provincial Taxpayers, Directly and Indirectly (cont'd)

The massive advertising campaign for highway 407 and the "free trial period" are reminiscent of cigarette advertising and attempts to get people "hooked" before they know the true costs. As smog-related diseases and deaths increase, and health-care and environmental costs grow, suburban highway purveyors will be held responsible for these costs, just like the cigarette industry is being held responsible for their liabilities.

Maintain Existing Highways in Safe Condition Before Building More

The growing disrepair of many provincial highways has attracted widespread public criticism and concerns about public safety. By spending scarce government resources on the planning and implementation of GTA projects like the extension of Hwy 407, the MOT may be short-changing smaller communities and remote areas. Smaller communities need highway improvements, and the associated roads, jobs and economic benefits, more than the GTA needs the Hwy 407 extension.

Avoid a Costly White Elephant

Conceived more than twenty years ago, Hwy 407 was designed to provide a bypass around Metro-Toronto for trucks and through traffic. However, the president of the Ontario Trucking Association predicts that truckers will not use highway 407, particularly during off-peak hours, because of the high toll rates required to pay for the \$1 billion construction cost (Toronto Star, December 28, 1996 page A4). With reduced truck and through-traffic use, Hwy 407 could become another financial white elephant, like Mirabel Airport. If Hwy 407 is extended further east, the \$1 billion cost will escalate rapidly during the crossings of the Rouge River valley, the Little Rouge River valley and the valleys of Duffin's Creek, and despite assurances to the contrary, the taxpayer will ultimately get stuck with the bill.

Highway 407 was planned before the effect of the recent widening of highway 401 could be assessed. Not yet completed, the widening of highway 401 has already improved traffic flow between Scarborough and Pickering, thus reducing the need for highway 407 east of Highway 404. In addition, traffic patterns are changing as we approach the 21st century. In the next century, more people will work at home, live near where they work, work flexible hours, take public transit or tele-commute, thus reducing rush-hour traffic demands on existing highways.

Nigel Wood
EA Branch, Ministry of Environment and Energy
Fax: 440-3771

Re: Highway 407 EA - Proposed Extension East of Hwy 48

Dear Mr. Wood:

We have a number of concerns about the proposed extension of Highway 407 and its potential for adverse economic, ecological and social effects. The attached questions relate to some of these concerns. We would appreciate a complete response to our questions.

We look forward to a thorough government review of the Highway 407 EA and we request a copy of the Review when it is released.

Sincerely,

Jim Robb
1 Brachburn Blvd
Scarborough, Ontario
M1J 2P9

Kevin O'Connor
6 Plover Road
Scarborough, Ontario
M1G 3C9

Questions Re: Hwy 407 EA - Extension East of 48

1. Has the widening of highway 401 improved the east west movement of traffic through Toronto and what is the average daily 401 traffic flow for each of the last ten years at Brook Road, at Markham Road and at McCowan Road?
2. What is the expected level of service for each section of highway 401 from Brook Road to highway 404, after the highway 401 improvements are complete?
3. The completion of the highway 401 widening will provide a no-cost alternative to highway 407, particularly during non-peak hours. Has the EA considered the effect of the highway 401 widening on the timing of, and need for, the highway 407 extension and the economic viability of highway 407 as a pay-for-use toll road?
4. How is the MOT practicing traffic demand management to reduce the problems caused by long-distance urban commuting and does the MOT have any plans to extend the highway 407 tolling system to highway 401 or the hwy 401 core lanes?
5. Does the EA's prediction of future traffic demand contain a careful assessment of the traffic-demand patterns for the 21st century and the growing importance of tele-commuting, flexible hours, home offices and pollution reduction objectives (e.g. Agenda 21 CO₂ Reduction Agreement)?
6. Will any decision on the further extension of highway 407 await an assessment of the financial viability of the first phase?
7. What legal and financial provisions are in place to ensure that the Ontario taxpayer does not get stuck with the bill if the 407 toll highway fails to pay for itself?
8. Why is the MOT spending scarce resources on the further extension of highway 407 in an area with other planning and transportation options when they do not have the funding to maintain existing highways in areas of the province which have fewer transportation options?
9. What are the development agreements or plans for the provincial lands (e.g. Cornell) which will affect, or be affected by, the decision on the extension of highway 407?

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19. At capacity, and over the length of the extension, what is the highway traffic's total estimated annual loadings (kg) for carbon-dioxide, carbon-monoxide, sulfur dioxide, NO_x, ground level ozone, heavy metals, and particulates less than 10 microns (PM₁₀).
20. What are the highway's estimated salt and metal loadings (kg) to surface and groundwater within the Rouge River watershed?
21. Instead of oververts, will the highway 407 extension have regularly spaced underpasses (e.g. every 500 metres or less) to ensure the highway does not sever pedestrian, bicycle, equestrian, stream and wildlife corridors? If not, could this design deficiency raise issues of "due diligence" and associated economic consequences regarding the failure to take adequate steps to avoid deadly traffic/people/wildlife conflicts?

THE CORPORATION OF THE TOWN OF WHITBY
In the Regional Municipality of Durham



Telephone
905-668-5803
Toronto
905-686-2621
Fax
905-686-7005

MUNICIPAL BUILDING
575 Rossland Road East
Whitby, Ontario
Canada
LIN 2M8

June 11, 1997
File: B-1000

Ministry of Environment and Energy
7 Overlea Boulevard
4th Floor
Toronto, Ontario
M4H 1A8

**RE: Highway 407 East Partial Extension
(Markham Road Easterly to Highway 7 East of Brock Road)
Environmental Assessment**

At a meeting held on June 9, 1997 the Council of the Corporation of the Town of Whitby passed the following resolution concerning the above subject:

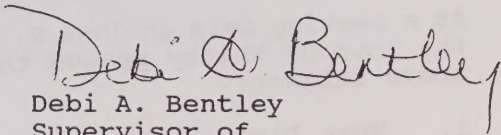
1. That Planning Director's Report, Item 98-97, be received as information;
2. The Ministry of Environment and Energy and the Ministry of Transportation of Ontario be advised that the subject environmental assessment does not address the interim traffic impacts east of Highway 407's proposed Pickering terminus on the arterial road grid into Whitby;
3. That the Town of Whitby encourage, in addition to the resumption of the environment assessment for Highway 407's extension to Highway 35/115, the initiation of a transportation impact and solutions study to review improvements to the existing arterial grid and interim improvements which should include, among other matters, the following:
 - (a) improvements to Highway 7, east of the interim Highway 407 Pickering terminus, including a by-pass around Brooklin utilizing the 407 alignment to Winchester Road;

File EA 03 03 C
Hwy 407 from
Hwy 48 to Goshen
Whitby Bdy

- (b) securing Lakeridge Road between Highway 401 and Highway 407 as a high speed arterial link; and,
 - (c) the construction of an interchange at Lakeridge Road and Highway 401 to provide better connectivity to Highway 407 and to relieve urban streets from through traffic trying to move between these two freeways;
- 4. That the Province of Ontario be requested to consider alternative transportation policies which will facilitate the movement of commuter traffic with the existing highway grid;
 - 5. That the Province of Ontario and the Region of Durham be requested to develop alternative employment and housing strategies based upon the principle of "people living where they work" to minimize the future need for commuter-driven superhighways; and,
 - 6. That the Ministry of Transportation of Ontario be requested to extend the deadline for public submissions to July 14, 1997.

A copy of Planning Director's Report, Item 98-97 has been enclosed for your review and information. Further information regarding the above can be obtained by contacting the Town's Planning staff at (905) 668-5803.

DAB/lcr
Encl.


Debi A. Bentley
Supervisor of
Administrative Services

c.c.: R.B. Short, Director of Planning

5-0

PLANNING DIRECTOR'S REPORT TO THE
PLANNING AND DEVELOPMENT COMMITTEE

ITEM: 98-97

JUNE 3, 1997

SUBJECT: HIGHWAY 407 EAST PARTIAL EXTENSION
(MARKHAM ROAD EASTERLY TO HIGHWAY 7 EAST OF BROCK ROAD)
ENVIRONMENTAL ASSESSMENT

Recommendation

1. That Planning Director's Report, Item 98-97 be received for information;
2. That the Ministry of Environment and Energy (M.O.E.E.) and the Ministry of Transportation of Ontario (M.T.O.) be advised that the subject environmental assessment does not address the interim traffic impacts east of Highway 407's proposed Pickering terminus on the arterial road grid, into Whitby; and,
3. That the Town of Whitby encourages, in addition to the resumption of the Environment Assessment for Highway 407's extension to Highway 35/115, a transportation impact and solutions study to be initiated to review improvements to the existing arterial grid, and interim improvements which should include, among other matters for consideration, the following:
 - improvements to Highway 7 east of the interim Highway 407 Pickering terminus, including a by-pass around Brooklin, utilizing the 407 alignment, to Winchester Road;
 - securing Lakeridge Road between Highway 401 and Highway 407 as a high speed arterial link; and,
 - the construction of an interchange at Lakeridge Road and Highway 401 to provide better connectivity to Highway 407 and to relieve urban streets from through traffic trying to move between these two freeways.

Origin

The Ministry of Transportation (the proponent) has submitted to the M.O.E.E. for approval an Environmental Assessment (EA) for a proposed extension of Highway 407/Transitway from Markham Road easterly to Highway 7 east of Brock Road. Copies of the EA have been sent to the Town for review and comment as indicated in the attached correspondence. As well, a copy is to be made available for public inspection. This directive has previously been publicized by the Ministry through newspaper notice.

Background

Highway 407 was initially considered during the 1940's and 1950's to provide an alternative east-west freeway route parallel to and north of Highway 401 across the Greater Toronto Area.

In 1990, MTO carried out a Route Planning study to identify a technically preferred route for Highway 407 between Markham Road and Highway 35/115. The route was endorsed by Regional Council; Whitby Council also endorsed the preferred route alternative through Whitby in 1991. It is noted that this technically preferred route is reflected in both the Durham Region and Whitby Official Plans.

The original schedule for the construction of Highway 407 between Highway 403 in the west and Highway 35/115 in the east contemplated a program that would meet the traffic demand without adversely affecting the local road system. In the early 1990's, the Province decided to accelerate the construction program wherein Highway 407 is intended to be completed to Markham Road by the end of 1998.

However, construction of the highway immediately east of Markham Road would not occur in time to address concerns over significant traffic problems in the Markham area, particularly with regard to potential traffic impacts on the Old Village of Markham located on Highway 48 north of Highway 7.

In response to these concerns, in January, 1996, MTO initiated the Highway 407 East Partial Extension Feasibility Study. The purpose of this study was to identify potential solutions to the traffic and environmental impacts expected to occur when Highway 407 opens to Markham Road in 1998. Four general alternatives were examined by the Feasibility Study as follows:

- no extension east of Markham Road;
- extension to the proposed Markham by-pass;
- extension to Regional Road 30 (York-Durham Townline); and,
- extension to, or immediately east of, Brock Road (Regional Road 1 at Brougham) which was the furthest easterly extension examined.

It is noted that the Feasibility Study did not alter the technically preferred route for 407 previously endorsed by Regional Council. Accordingly, there would be no impact on 407's preferred route through Whitby arising out of the subject Highway 407 partial extension project.

The Feasibility Study concluded that the interim extension of 407 should be to the Highway 7/Brock Road area which was seen as being the alternative most appropriately addressing anticipated travel demand, while mitigating community impacts. The MTO in consultation with MOEE determined that an individual Environmental Assessment would be the most appropriate and expedient approach to complete the work. This Assessment has now been completed, circulated for public comment, and is the subject of this report.

Analysis

The MTO is seeking approval under the Environmental Assessment Act for an ultimate basic 10 lane freeway to be constructed in stages corresponding to existing/future traffic demands. Also to be approved is the future implementation of a transitway in a separate corridor adjacent to Highway 407.

The completed Environmental Assessment report is available for viewing by the public as requested. The document is very large reflecting the comprehensive and detailed nature of the assessment.

It consists of a 242 page text, sub-divided into six topic areas (chapters), as well as an Executive Summary which is attached, and 25 technical Appendices. The report provides the need and justification for the extension. Specific topics addressed include:

- **Background and History;**
- **Problem and Opportunities,** documenting the future traffic capacity deficiencies in the Highway 7 corridor east of Markham Road;
- **Study Area** (extends to just east of Brock Road);
- **Alternatives to the Undertaking,** the analysis of which resulted in determining the extension of 407 east of Markham Road as an "interim" 4-lane facility as being a logical first priority in a package of improvements intended to resolve existing short term capacity deficiencies; also includes protection for a basic 10-lane freeway facility and a higher order transitway to parallel Highway 407.
- **Existing Conditions,** wherein 26 environmental evaluation

factors and 88 associated indicators were identified to evaluate the route alternatives;

- **Route Planning Alternatives**, which led to the aforementioned preference of a partial extension of 407 to just east of Brock Road;
- **Rationale for the Undertaking**, which also indicates that the option of the immediate extension to Highway 7 east of Brock Road was acceptable to the Town of Markham and the Region of York and strongly preferred by the Town of Pickering and the Region of Durham (because the report notes, it relieves the future traffic volumes in Green River, Whitevale, and Brougham and supports economic development in the Durham Region);
- **Description of the Undertaking to be approved**. Briefly, the extension will include the following components:
 - a basic minimum highway right-of-way width of 100m, capable of accommodating a future potential 10 lane facility and a transitway with a basic minimum 60 metre right-of-way;
 - full interchanges at Markham Road, the 9th Line, Markham By-Pass, the Durham-York Line and Brock Road; the Durham-York line interchange also requires relocation of Hwy. 7 to the north between the C.P. tracks east of Locust Hill and Green River;
 - a bridge, but no access, at 10th Line;
 - bridges at the Rouge River, CP tracks and Little Rouge River;
 - provision for two future interchanges between the Durham/York Line and Brock Road, the specific locations for which will be determined as part of the planning of Seaton;
 - a bridge, but no access, at Sideline 16; and
 - a connection to Highway 7 east of Brock Road.

In describing the undertaking, it was also noted that implementation of the extension will likely be staged over a number of years reflecting financial conditions and traffic/transit demands. Initial construction could consist of 2 basic lanes per direction, plus auxiliary lanes where required;

• **Summary of Concerns and Commitments**, including an outline of an ongoing stakeholder consultation process to be implemented as part of a combined preliminary and detailed design and construction phase, which is a unique approach intended to streamline implementation; and,

• **Conclusion**

The EA report concludes that without an easterly extension of Highway 407, there will be serious traffic problems for the area road network east of Markham Road and in easterly communities when Highway 407 opens at Markham Road. The assessment notes that there is a significant shortfall in east-west transportation capacity in the Highway 7 corridor and across the Durham-York boundary. It concludes that an extension of the 407 is needed to address both immediate and longer term transportation problems, and that such an extension must go as far east as Highway 7 east of Brock Road to minimize traffic impacts on local communities.

Comments

Public Works Department

1. The report has noted the extension of Highway 407 from Markham Road to Highway 7, east of Brock Road, and the study area is in fact for that specific area. In general, the report has analyzed the environmental issues

as it relates to this present extension. It does not appear to have contemplated the impacts it may have to Whitby and in particular, to the Brooklin area. The study is intended to address the immediate and long term needs of the Durham/Metro/York boundary and the traffic problems that will occur in the Markham Road area. It has also focused on the elimination of particular traffic problems that may have occurred in the communities of Box Grove, Green River, Locust Hill, Whitevale, Brougham and Greenwood. There is no indication of where the traffic is intended to travel after it leaves Highway 407. In fact, the majority of traffic will proceed along Highway 7 and impact the Brooklin area. It should be recommended that the Ministry, as they have protected all other communities along the Highway 7 route, should propose alternatives to deal with the possible impacts on Brooklin, both along Winchester Road and Highway 12.

2. The design of Highway 407 extension has been limited to four lanes and it is intended that it would be expanded to ten lanes in the future. The construction will require the Province to return to this area and widen the proposed road to an ultimate ten lanes. From a financial point of view this is a cost savings at this time but will add to the costs of the construction in the future. Also, the extension of a four lane highway in this area does not provide confidence to Durham Region and to the Town of Whitby that a further extension of Highway 407 will happen in the short term.
3. The report has suggested that the implementation of the ultimate Highway 407 will be staged over time and dependent upon economic and travel demands. This type of comment leaves the scheduling of Highway 407 open-ended and long term. The Region of Durham and the Town of Whitby should be pressuring the Ministry for a further extension of Highway 407 to accommodate the development in the northern Durham area through Whitby and Oshawa. As it is presently proposed, the Town of Whitby will be faced with the problems of increased traffic volumes and will not be receiving any benefits from a road system that will lead to new development initiatives in the area.
4. It is the Public Works recommendation that the Ministry of Transportation should be encouraged to extend the four lane facility through to Lakeridge Road and to bypass Brooklin and possibly terminate at Thicksen Road.
5. The Public Works Department supports the construction of at least a partial highway interchange at Lakeridge Road (Regional Road 23) and Highway 401 (Macdonald Cartier Freeway) and requests the MTO strongly consider this recommendation as an interim transportation link to Highway 407 extension benefitting not only the Town of Whitby but the Regional Municipality of Durham as well.

Planning Department

As noted, Highway 407's interim extension into Durham to a point east of Brougham will assist in resolving the serious traffic problems between this point and Markham Road. Although there may be improvements in providing additional east-west traffic capacities at the York/Durham boundary, new impacts will be witnessed on the existing arterial road grid further to the east. Although the Ministry plans to resume its E.A. studies for the 407's extension to Highway 35/115, the timing of construction of the 407 through Whitby, let alone to Highway 35/115, is not clear. Staff are concerned that the ultimate extension for the 407 west of Metro and through Durham, will be competing for limited dollars to build other major provincial transportation facilities. Therefore, the actual construction of the 407 through Durham may take a

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ITEM NO. 18-41

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considerable period of time to implement. The shorter term implications of the partial extension of the 407 to Pickering on the east-west arterials and the north-south arterials, where traffic tries to interconnect between the 407 and the 401, have not been fully addressed by this study. Staff are of the view that Whitby roads will be impacted. Although one view may be that greater volumes and congestion may necessitate the 407's accelerated extension through Durham, economics may mean a "longer" and phased timeframe for the 407's development through the Region. This issue needs more study by the Ministry of Transportation. Planning Staff encourage Council, as part of the EA study for the 407's extension, to request a transportation study that would assess the traffic impacts beyond the 407's Pickering terminus and the merits of more immediate improvements to the existing arterial grid that would, if necessary, advance Highway 407's extension in order to:

- a) better accommodate increased traffic on the arterial grid over an extended time period;
- b) provide an interim high speed arterial link between Highways 401 and 407 and to assist moving high volume truck traffic around built up areas; and,
- c. provide more immediate direct access to north Whitby/Oshawa while by-passing Brooklin.

Possible solutions that should be considered as a part of this study include:

- a) improvements to Highway 7 east of the Highway 407 interim terminus; including the construction of an interim by-pass around Brooklin utilizing the 407 alignment for direct highway access into north Whitby, Oshawa and Clarington; and,
- b) securing Lakeridge Road as a high speed arterial between Highway 7 and Highway 401, together with an interchange at Highway 401, in order to provide a by-pass for through automobile and truck traffic around the developed urban areas that originates from, or is destined to, Highway 407..

Summary and Conclusion

The route alternative put forward for the Highway 407 extension does not differ from the previous alternative endorsed by the Region. As such, it will have no effect on the technically preferred 407 route alternative through Whitby. Planning staff support the notion of the significant economic and social benefits that would accrue with the completion of Highway 407 through Durham Region. There is no objection to the EA report on the interim extension of the 407 into Pickering, assuming of course, that it is considered a temporary solution and a necessary initial step to the facility's ultimate extension to Highway 35/115.

As was indicated through the Joint Report of the Directors of Planning and Public Works, Item 44-97, Staff would continue to encourage the Province to also: upgrade Highway 7, from the 407 interim terminus east of Brougham to Lakeridge Road; improve the Lakeridge Road/Highway 7 intersection; and, utilize Lakeridge Road as a high speed arterial road connecting to Highway 401 through the construction of a full interchange.

LC/RBS



Ontario

TEMINC 98-97

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

250 Davisville Avenue
Toronto ON M4S 1H2

250, avenue Davisville
Toronto ON M4S 1H2

April 16, 1997

PLANNING
APR 15 1997
DEPARTMENT

(416) 440-3483

COPY

TO: Municipal Clerks
Distribution list #2

Dear Sir/Madam:

RE: HIGHWAY 407/TRANSITWAY (MARKHAM ROAD EASTERLY
TO HIGHWAY 7 EAST OF BROCK ROAD) ENVIRONMENTAL
ASSESSMENT
EA FILE NO. TC-CE-02

Enclosed are two copies of the above-noted Environmental Assessment (EA) submitted to the Minister of Environment and Energy for approval under the *Environmental Assessment Act*. Please complete and return the "Acknowledgement of Receipt" form as soon as possible.

One copy of the EA is intended for your internal use. Please make the other available for public inspection. The public will be advised of this opportunity through a notice in the newspaper. The Ministry of Transportation will confirm the publication date and send you a copy of the notice.

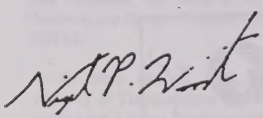
The Ministry of Environment and Energy will co-ordinate a Review of the EA, based on comments from ministries, government agencies, municipalities and the interested public. The deadline for comments is June 6, 1997. All comments will be noted in the Review and kept on the public record file at the Environmental Assessment Branch.

The ministry will issue a public notice once the Review is completed. Please retain the EA documents after June 6, 1997, for this second inspection period. Please ensure that the public has access to the Environmental Assessment, the Review and the ministry's public notice, once you have received them.

TEL NO 98-97

If you have any questions regarding this environmental assessment or the review procedure, please contact me at the above number.

Yours sincerely,



Nigel Wood
Review Coordinator
Environmental Assessment Branch

Enclosure

cc: Paul Jankowski
Project Director, Highway 407 East
Ministry of Transportation

EA File No. TC-CE-02

NW/pm
WP162\01721-#2

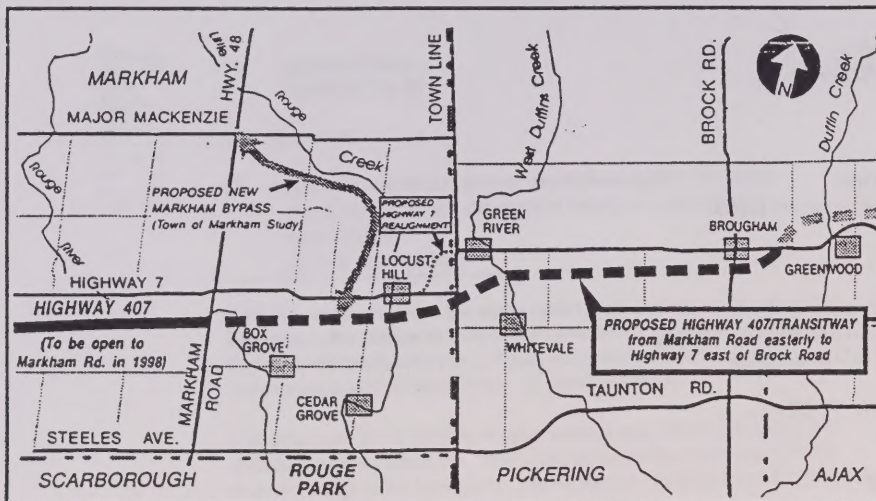


ENV. NO. 98-97

AN INVITATION TO COMMENT ON THE ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED HIGHWAY 407 / TRANSITWAY
FROM MARKHAM ROAD EASTERLY TO HIGHWAY 7 EAST OF BROCK ROAD

THE ENVIRONMENTAL ASSESSMENT ACT SUBSECTION 6.3
NOTICE OF SUBMISSION

The Ministry of Transportation [the proponent] has submitted an Environmental Assessment (EA) for a proposed extension of Highway 407 / Transitway from Markham Road easterly to Highway 7 east of Brock Road (see key plan) to the Ministry of Environment and Energy (MOEE). Approval under the Environmental Assessment Act (EA Act) is being sought for an ultimate basic 10 lane freeway to be constructed in stages corresponding to existing / future traffic demands. In addition, approval is being sought for the future implementation of a transitway in a separate corridor adjacent to Highway 407.



This EA has been submitted in accordance with a transitional process implemented with amendments to the EA Act which came into force on January 1, 1997. Under subsections 12.4(2) and 12.4(3) of the EA Act, certain provisions of the former and the new Part II of the Act will apply to this environmental assessment.

Under these new provisions there will be one opportunity, after the Notice of Completion of Review is published, to make submissions and request a hearing. MOEE is also proposing to apply the new provision which would allow a hearing to be requested either on the whole environmental assessment or only on particular matters of concern. MOEE will consider requests to refer matters to mediation as appropriate.

MOEE has, at the proponent's request, applied the provision of section 12.2 of the amended Act with respect to activities permitted before receiving approval.

You have the right to submit comments on the proposed undertaking, the environmental assessment and the proposed application of any particular new provision of the amended Act to this EA.

Notice of the submission of the EA Report and its availability for public review is being sent to those who participated during the study.

TEMP NO 98-97

EXECUTIVE SUMMARY**A. BACKGROUND & HISTORY**

Highway 407 (see Exhibit 1) was initially considered during the 1940s and 1950s and, since that time, has been incorporated into the planning of all major transportation and land use decisions, for what is now known as the Greater Toronto Area (GTA).

In the early part of 1990, the Ministry of Transportation (MTO) carried out a Route Planning study to identify a technically preferred route for Highway 407/Transitway between Markham Road and Highway 35/115. This Route Planning Study evaluated several route alternatives on the basis of a broad range of environmental effects in consultation with affected agencies, municipalities and the public. The study identified a technically preferred route for the facility.

The original schedule for the construction of Highway 407 between Highway 403 in Oakville and Highway 35/115 in Clarington, anticipated a program that would meet the traffic demand without adversely affecting the local road system. However, in the early 1990's the construction of Highway 407 was accelerated when the Province announced a contract to develop, design and build Highway 407 from Highway 403 in the City of Mississauga to Markham Road in the Town of Markham. Under this accelerated program, the Highway 407 contract requires Highway 407 to be completed to Markham Road by the end of 1998. With the acceleration of the construction program for Highway 407 west of Markham Road, the construction of Highway 407 immediately east of Markham Road would not occur in

time to address significant traffic problems in the Markham area.

In early 1996, the Ministry evaluated the feasibility of ways of addressing the traffic concerns related to the planned 1998 completion of Highway 407 to Markham Road.

The Environmental Assessment Report documents the results of the studies that selected the technically preferred route and concluded with the decision to extend Highway 407 and a Transitway from Markham Road to Highway 7 east of Brock Road. The project location is shown on Exhibit 2.

B. PROBLEM AND OPPORTUNITIES

Chapter 2 of the EA Report provides a synopsis of the transportation analysis carried out for the project and documents the need for more transportation capacity.

Over the past three decades, numerous planning and transportation studies have been undertaken in west Durham and the eastern portions of Metropolitan Toronto and York Region. All of these studies recognized the transportation related constraints in and around the GTA and the need for additional east-west transportation capacity across the Metro-York/Durham Boundary. A number of these studies also recognized that a combination of roadway, transit and Transportation Demand Management (TDM) improvements is required to satisfy existing and future transportation demands.

For this EA, screenline analyses were carried out for three horizon years: 1998, 2011 and 2021. Exhibit 3 (a) displays the analysis for a scenario with Highway 407 extending to

Markham Road, while Exhibit 3 (b) shows the analysis of a scenario with Highway 407 extending to Brock Road/Highway 7 as a 4-lane "interim" freeway facility.

1998 Deficiencies

The traffic analysis demonstrates that when Highway 407 Central opens to Markham Road, the following conditions can be expected:

- Markham Road between Highway 7 and Highway 407 will be extremely congested;
- the Highway 7 corridor will have a capacity deficiency equivalent of 1-

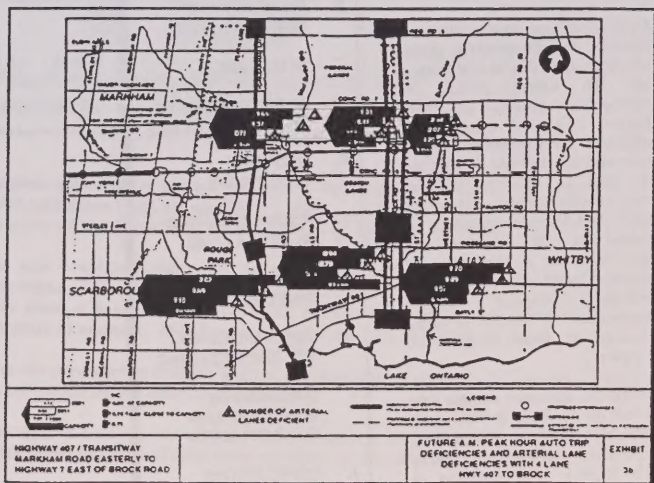
CONTENTS

- A. BACKGROUND & HISTORY
- B. PROBLEM AND OPPORTUNITIES
- C. STUDY AREA
- D. ALTERNATIVES TO THE UNDERTAKING
- E. EXISTING CONDITIONS
- F. ROUTE PLANNING ALTERNATIVES
- G. RATIONALE FOR THE UNDERTAKING
- H. DESCRIPTION OF THE UNDERTAKING
- I. SUMMARY OF CONCERNS AND COMMITMENTS
- J. CONCLUSIONS

The map displays the proposed Highway 407/Transitway corridor from Highway 7 East to Highway 204 West. It identifies various lane deficiencies and future A.M. peak hour auto trip deficiencies. Key features include:

- Legend:**
 - NO. OF LANE IN GARDWAY:**
 - 1 LANE FROM GARDWAY TO GARDWAY
 - 2 LANE
 - 3 LANE
 - 4 LANE
 - NUMBER OF ARTERIAL LANES DEFICIENT:**
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The map shows the corridor running north-south, with Highway 7 East at the top and Highway 204 West at the bottom. Major roads crossing the corridor include Highway 101, Highway 102, Highway 103, Highway 104, Highway 105, Highway 106, Highway 107, Highway 108, Highway 109, Highway 110, Highway 111, Highway 112, Highway 113, Highway 114, Highway 115, Highway 116, Highway 117, Highway 118, Highway 119, Highway 120, Highway 121, Highway 122, Highway 123, Highway 124, Highway 125, Highway 126, Highway 127, Highway 128, Highway 129, Highway 130, Highway 131, Highway 132, Highway 133, Highway 134, Highway 135, Highway 136, Highway 137, Highway 138, Highway 139, Highway 140, Highway 141, Highway 142, Highway 143, Highway 144, Highway 145, Highway 146, Highway 147, Highway 148, Highway 149, Highway 150, Highway 151, Highway 152, Highway 153, Highway 154, Highway 155, Highway 156, Highway 157, Highway 158, Highway 159, Highway 160, Highway 161, Highway 162, Highway 163, Highway 164, Highway 165, Highway 166, Highway 167, Highway 168, Highway 169, Highway 170, Highway 171, Highway 172, Highway 173, Highway 174, Highway 175, Highway 176, Highway 177, Highway 178, Highway 179, Highway 180, Highway 181, Highway 182, Highway 183, Highway 184, Highway 185, Highway 186, Highway 187, Highway 188, Highway 189, Highway 190, Highway 191, Highway 192, Highway 193, Highway 194, Highway 195, Highway 196, Highway 197, Highway 198, Highway 199, Highway 200, Highway 201, Highway 202, Highway 203, Highway 204, Highway 205, Highway 206, Highway 207, Highway 208, Highway 209, Highway 210, Highway 211, Highway 212, Highway 213, Highway 214, Highway 215, Highway 216, Highway 217, Highway 218, Highway 219, Highway 220, Highway 221, Highway 222, Highway 223, Highway 224, Highway 225, Highway 226, Highway 227, Highway 228, Highway 229, Highway 230, Highway 231, Highway 232, Highway 233, Highway 234, Highway 235, Highway 236, Highway 237, Highway 238, Highway 239, Highway 240, Highway 241, Highway 242, Highway 243, Highway 244, Highway 245, Highway 246, Highway 247, Highway 248, Highway 249, Highway 250, Highway 251, Highway 252, Highway 253, Highway 254, Highway 255, Highway 256, Highway 257, Highway 258, Highway 259, Highway 260, Highway 261, Highway 262, Highway 263, Highway 264, Highway 265, Highway 266, Highway 267, Highway 268, Highway 269, Highway 270, Highway 271, Highway 272, Highway 273, Highway 274, Highway 275, Highway 276, Highway 277, Highway 278, Highway 279, Highway 280, Highway 281, Highway 282, Highway 283, Highway 284, Highway 285, Highway 286, Highway 287, Highway 288, Highway 289, Highway 290, Highway 291, Highway 292, Highway 293, Highway 294, Highway 295, Highway 296, Highway 297, Highway 298, Highway 299, Highway 300, Highway 301, Highway 302, Highway 303, Highway 304, Highway 305, Highway 306, Highway 307, Highway 308, Highway 309, Highway 310, Highway 311, Highway 312, Highway 313, Highway 314, Highway 315, Highway 316, Highway 317, Highway 318, Highway 319, Highway 320, Highway 321, Highway 322, Highway 323, Highway 324, Highway 325, Highway 326, Highway 327, Highway 328, Highway 329, Highway 330, Highway 331, Highway 332, Highway 333, Highway 334, Highway 335, Highway 336, Highway 337, Highway 338, Highway 339, Highway 340, Highway 341, Highway 342, Highway 343, Highway 344, Highway 345, Highway 346, Highway 347, Highway 348, Highway 349, Highway 350, Highway 351, Highway 352, Highway 353, Highway 354, Highway 355, Highway 356, Highway 357, Highway 358, Highway 359, Highway 360, Highway 361, Highway 362, Highway 363, Highway 364, Highway 365, Highway 366, Highway 367, Highway 368, Highway 369, Highway 370, Highway 371, Highway 372, Highway 373, Highway 374, Highway 375, Highway 376, Highway 377, Highway 378, Highway 379, Highway 380, Highway 381, Highway 382, Highway 383, Highway 384, Highway 385, Highway 386, Highway 387, Highway 388, Highway 389, Highway 390, Highway 391, Highway 392, Highway 393, Highway 394, Highway 395, Highway 396, Highway 397, Highway 398, Highway 399, Highway 400, Highway 401, Highway 402, Highway 403, Highway 404, Highway 405, Highway 406, Highway 407, Highway 408, Highway 409, Highway 410, Highway 411, Highway 412, Highway 413, Highway 414, Highway 415, Highway 416, Highway 417, Highway 418, Highway 419, Highway 420, Highway 421



E. EXISTING CONDITIONS

Chapter 4 of the EA Report describes the existing conditions within the study area. The soils in the entire study area are classified as having Class 1-2 capability for agriculture. Although much of the area is in agricultural usage, the local Official Plans designate most of the land for non-agricultural uses. The exception is the Rouge-Duffins Agricultural Area between the Little Rouge and West Duffins Creeks.

Urban development is currently focused in the Town of Markham and in rural hamlets including Box Grove, Green River, Locust Hill, Whitevale and Brougham. Future urbanization is planned with major developments proposed in the Cornell and Seaton areas. Because of the proximity of the corridor to existing and proposed developments, noise and visual impacts were a consideration during route planning and assessment.

The major natural features in the study area are associated with the north-south oriented watercourses. Terrestrial and aquatic studies conducted for the EA show that the watercourses and valleys associated with the Rouge River, Little Rouge Creek, West Duffins Creek, Urfé Creek and a tributary of the West Duffins Creek and Brougham Creek provide the most significant fisheries and wildlife habitat.

These valley systems also provide valued corridor functions and therefore were a major consideration throughout the study. Many of these valley systems are within the proposed Rouge North Park, and the Whitevale Corridor ESA.

In addition to the valley systems, areas of upland vegetation were identified with certain significant

woodlots in the Town of Markham being avoided during route planning.

There are zones of high water table, groundwater recharge and upwelling that were important considerations in the identification and assessment of route alternatives.

The study area has numerous archaeological sites and several historical buildings. Therefore, impacts to heritage resources were considered during the assessment of alternatives.

The existing transportation network in the study area is comprised of a combination of federal, provincial and municipal roadways and transit systems. As discussed in Section B, dealing with problems and opportunities, this transportation system is currently experiencing considerable congestion and will be unable to handle the anticipated increase in travel demand.

There are no existing utilities nor geotechnical conditions within the study area that were considered to represent a major constraint during route identification or evaluation.

Based upon a thorough understanding of the study area, 26 factors and 88 associated indicators were identified and used in the evaluation of route alternatives. These indicators are described in Appendix 1 to the EA Report.

F. ROUTE PLANNING ALTERNATIVES

Chapter 5 of the EA describes the Route Planning phase of the study in detail. This phase of the study was completed in 1992. During this phase of the study, alternative route segments were identified using a constraints approach. In other words major constraint areas were avoided where possible. The route alternatives, and constraints affecting their selection

are shown in Exhibit 5. The various route segments were assessed with respect to their impact on 88 indicators under the following factor areas:

- Natural Environment
- Social Environment
- Cultural Environment
- Agriculture
- Economic Environment
- Transportation and Engineering

The assessment led to the identification of the Technically Preferred Route shown in Exhibit 2.

Throughout the identification, assessment and analysis of alternatives, external agencies, municipalities, special interest groups and the public were consulted. This consultation involved mailings, meetings, and Public Consultation Sessions. The consultation process is described in detail in Chapter 1 of the EA.

The Technically Preferred Route was presented to the stakeholders and comments were invited. In response to a request from special interest groups, an alternative location for crossing the Little Rouge Creek was investigated and eventually selected because it crossed at a less environmentally sensitive location.

Significant traffic increases are anticipated on the road network east of Markham Road with the opening of Highway 407 to Markham Road, and it has been determined that an extension of Highway 407 east of Markham Road is the best available solution.

Subsequently 3 extension staging options were identified and evaluated. These included extensions to:

- the proposed Markham Bypass;
- the Durham-York Line; and
- Highway 7 east of Brock Road.

Each option followed the technically preferred route identified through the Route Planning phase.

The 3 options, along with the "Do-nothing Option", were evaluated in light of the environmental, social, cultural, agricultural, economic and transportation implications. Since many of the impacts had already been dealt with during the Route Planning phase, the key determining factor in evaluating the extension staging options was the traffic implications in the communities of Markham, Green River, Whitevale, Box Grove, Locust Hill, Brougham and Greenwood. Exhibit 6 shows the projected traffic impacts of each option on the local communities based on traffic modelling.

As described in Chapter 5 of the EA, the extension to Highway 7 east of Brock Road was necessary to minimize any potential increase in traffic through local communities. This extension results in a lowering of traffic in all communities other than Greenwood. Although the traffic increase in Greenwood is not expected to be significant, the Town of Pickering and Region of Durham are currently investigating a combination of traffic calming and roadway improvements to address these traffic concerns.

G. RATIONALE FOR THE UNDERTAKING

The environmental assessment concluded that the selected route was optimal from a number of standpoints including:

- The route takes maximum advantage of opportunities to avoid social, environmental, and engineering constraints identified through the data collection process;
 - The route minimizes impacts upon established communities;
 - The route is the most compatible with federal, provincial and municipal policy initiatives; and
 - The preferred alternative is reasonably direct through the study area.
- Furthermore the study concluded that the immediate extension to Highway 7 east of Brock Road was preferred for the following reasons:
- Terminating Highway 407 at Markham Road (i.e. Do Nothing) is not a desirable option because it does not address the significant traffic problems that will be experienced in the Town of Markham and communities east of Markham Road with the opening of Highway 407;
 - Many of the public comments received expressed a general desire to extend Highway 407 to the east of Brougham as soon as possible;
 - Although this option impacts the natural and cultural environment, and agricultural lands, it reduces projected traffic volumes on Markham Road and within the villages of Green River, Whitevale, Locust Hill, Box Grove and Brougham, without significantly increasing the traffic volumes through other communities. The other options did not result in reduced traffic volumes in all of these communities.
 - This option is acceptable to the Town of Markham and the Regional Municipality of York because it relieves the future traffic volumes in the Town of Markham, Box Grove and Locust Hill, and supports the Cornell development.
 - This option is strongly preferred by the Town of Pickering and the Regional Municipality of Durham because it relieves the future traffic volumes in Green River, Whitevale and Brougham, and supports economic development in the Durham Region.
 - There is also general public support for this option because it will reduce traffic volumes in the communities along the route.
 - This option crosses several significant watercourses, and concerns have been expressed by regulatory agencies, interest groups and the public. The impacts have been reduced through the development of an

alignment through the Route Planning Study that avoids more sensitive environmental features. In addition, bridges are proposed at the major river crossings to further reduce the impacts on vegetation, fisheries and wildlife. Extensive consultation with affected stakeholders during the Feasibility Study resulted in the development of a Stakeholder Consultation Process, which identifies commitments to future work and mitigation of environmental impacts during the design and implementation phase. It also specifies a process through which stakeholders are involved with the design and construction process. As well, further public consultation sessions will be held to receive additional input. These commitments are discussed in more detail in Section I below, and in Chapter 6 or the EA Report.

H. DESCRIPTION OF THE UNDERTAKING

In 1997, the EA Act was amended. This EA for Highway 407 and a Transitway is being submitted in accordance with the transition provisions of the amended Act. As such, MTO has requested to have Part II of the previous EA Act; and those provisions of Part II of the new Act with respect to mediation and the Section 12.2 activities permitted before approval, to apply to this EA.

The location of the undertaking for which approval is being sought is illustrated in Exhibit 2. The undertaking includes the:

- Design, construction, operation and maintenance of a freeway (up to 10 basic lanes) with a basic minimum 100m right-of-way from Markham Road easterly to Highway 7 east of Brock Road;
- Design, construction, operation and maintenance of a transitway with a basic minimum 60 metre right-of-way from Markham Road easterly to Highway 7 east of Brock Road;

- Design, construction, operation and maintenance of full interchanges at Markham Road, the 9th Line, Markham Bypass, the Durham-York Line (Regional Road 30), and Brock Road;
- Design, construction, operation and maintenance of two interchanges between the Durham-York Line and Brock Road at specific locations to be determined at a later date as part of the Season planning process (See Chapter 4 of the EA Report for a description of the Season development proposal);
- Design, construction, operation and maintenance of a realignment of Highway 7 and 11th Line at the Durham-York Line to allow for the Highway 407 interchange;
- Design, construction, operation and maintenance of a connection to Highway 7, east of Brougham permitting access to and from both the east and the west;
- Design, construction, operation and maintenance of grade separations at 10th Line in Markham, and North Road, Sideline 24 and Sideline 16 in Pickering, and the CPR Havelock Subdivision west of the Little Rouge Creek;
- Closure of all north-south roads crossed by Highway 407/transitway where interchanges or grade separations have not been indicated; and
- Acquisition of property for, and construction of the ultimate Highway 407/Transitway and associated features, which may include but are not limited to: stormwater management facilities; temporary construction easements; access roads; and mitigation/compensation measures.

Approval of the undertaking by the Minister of Environment and Energy will allow the Ministry of Transportation (MTO) or its agent to:

- refine the alignment and property requirements for the

- undertaking during the design phase;
- file a designation plan for the undertaking;
- acquire property necessary for implementation of the undertaking; and
- design, construct, operate and maintain the completed highway and transitway, and the associated features.

Implementation of the undertaking will take place over a number of years and reflect financial conditions and traffic/transit demands. It is likely that the implementation of the project will be staged. This staging may include:

- Phasing of the ultimate basic 10 lane highway cross section to respond to traffic demands. Initial construction could consist of 2 basic lanes per direction, plus auxiliary lanes where required. The additional lanes would be added as traffic demands grow and downstream roadway capacity to handle the added traffic is in place.
- Opening of the highway to traffic as sections become available for use.
- Staging of some interchanges and grade separations with at grade intersections initially.
- Staging of interchange ramps to provide for moves restricted to certain directions initially with others being added when traffic demands/network development warrant.
- Provision of an interim connection at Highway 7 east of Brock Road
- Construction of a Transitway in a separate corridor adjacent to Highway 407.

It is important to note that mitigating measures will be planned and designed on the basis of the ultimate facility. However, the implementation of mitigating measures may also be phased in accordance with the impacts associated with each phase of implementation.

Note: The approval being sought by this EA, and the commitments made in this EA, will apply to and be

binding upon the Ministry of Transportation, its agents, successors, transfers and/or assigns, and will be applicable to the design, construction, operation and maintenance of the undertaking.

I. SUMMARY OF CONCERNS AND COMMITMENTS

Throughout the planning of this undertaking, the Project Team sought to identify areas of environmental concern and to identify a route that was sensitive to these concerns. With a project of this nature, it is not possible to avoid all environmental impacts. Therefore, it will be important that during the design phase, measures are developed to further reduce unavoidable impacts. A key component of this effort to reduce environmental impacts is the *Stakeholder Consultation Process* that was developed with extensive input by the stakeholder agencies. It was also reviewed with the public and interest groups at the last round of public consultation sessions.

The design team will meet with the stakeholders on a regular basis during the design and construction phase. A schedule of meetings will be established at the outset of consultation to ensure that stakeholders can effectively schedule their participation. As well, all meetings will be documented.

To keep the public informed through the design phase and to allow for public input, two public consultation sessions will be held during the design phase. In addition, public notification of the commencement of construction will be provided.

Specific commitments to environmental protection measures, ongoing consultation and follow-up monitoring will be documented in "Design and Construction Reports" and made available to the

**SUMMARY OF CONCERNS/POTENTIAL ENVIRONMENTAL EFFECTS/ PROPOSED
MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK**

Table 6.6.1 in the EA report provides a summary of: environmental issues/concerns; the concerned external interests that identified the issues; the potential environmental effects of the undertaking; the proposed mitigating measure; the commitments to future work; and where in the EA Report further discussion of the mitigating measure can be found.

Steps taken during the design stage of the project to address and finalize environmental commitments will be documented in "Design and Construction" reports which will be available to stakeholder agencies for information and monitoring purposes prior to construction.

The following summarizes the commitments that apply to the entire undertaking. The reader should refer to the complete Table in Chapter 6 of the EA, for the site specific commitments.

In Table 6.6.1, the following shortforms apply:

MNR	- Ministry of Natural Resources	DFO	- Department of Fisheries and Oceans
MOEE	- Ministry of Environment and Energy	DOE	- Environment Canada
MTRC	- Metro Toronto Region Conservation	MCzCR	- Ministry of Citizenship, Culture and Communications
RPA	- Rouge Park Alliance	LACAC	-Local Architectural Conservation Advisory Committee
SCP	- Stakeholder Consultation Process		

NOTE: Reference in this Table to the impacts of culverts is intended to make the reader aware of the potential for the use of culverts at some crossings. However, as stated throughout this EA, the actual type of crossing to be employed will not be determined until the design stage, and will be done in consultation with the affected stakeholders.

TABLE 6.6.1
SUMMARY OF CONCERNS/POTENTIAL EFFECTS/PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Location	Environmental Issues/ Concerns	Concerned Group/Agency	Potential Environmental Effects of the Undertaking	Proposed Mitigating Measures, Commitments to Further Work	Comments
Entire Route	Spills	MOEE, MNR, MTRC, RPA, DFO, DOE, Interest Groups, Public	Spills can cause adverse effects on surface and ground water and soils.	Ease of containment of spills at stormwater management facilities will be reviewed during design.	See Section 6.4.1
	Contaminated sites	MOEE	Unknown contaminated sites may be encountered during design or construction.	A Phase 1 assessment of property is currently underway. Sites will be managed in accordance with MOEE's decommissioning guidelines.	See Section 6.4.1
	Noise	MOEE, Municipality, Public	Increased noise	Detailed noise studies will be carried out during design phase and appropriate mitigating measures will be determined.	See Section 6.4.2
	Agricultural land	OMAFRA, Public	Loss of prime agricultural land.	Impact reduced through planning. Opportunities for further reduction will be considered during design	See Section 6.4.4
	Impacts on wells/septic systems	MOEE, Municipality, Public	Reduction in supply. Impacts on quality and quantity of groundwater. Possible pathway to aquifers if not properly abandoned.	Contractor will be responsible for correcting impacts resulting from construction. Wells and septic systems removed from service will be properly abandoned/ decommissioned.	See Section 6.4.1
	Impacts on groundwater recharge areas.	MOEE, MNR, MTRC, Municipality, DFO, DOE	Roadway runoff and spills can adversely affect groundwater quality.	Stormwater management plans will be developed to minimize the effects of stormwater. (See spills.)	See Section 6.4.1

ENC. 76-71
5-2.

PUBLIC WORKS DEPARTMENT

ITEM NO. 98-91

INTER-OFFICE MEMO

TO: Bob Short
Director of Planning

DATE: May 29, 1997

FROM: Wayne Hancock
Director of Public Works

FILE: A-2300

SUBJECT: Highway 407/Transitway
Markham Road Easterly to Highway 7, east of Brock Road
Environmental Assessment Report

Please note the following comments as they relate to the above noted Environmental Assessment Report.

1. The report has noted the extension of Highway 407 from Markham Road to Highway 7, east of Brock Road, and the study area is in fact for that specific area. In general, the report has analyzed the environmental issues as it relates to this present extension, but I do not believe that it has contemplated the impacts it may have to Whitby and in particular, to the Brooklin area. The study is intended to address the immediate and long term needs of the Durham/Metro/York boundary and the traffic problems that will occur in the Markham Road area. It has also focused on the elimination of particular traffic problems that may have occurred in the communities of Box Grove, Green River, Locust Hill, Whitevale, Brougham and Greenwood. There is no indication of where the traffic is intended to travel after it leaves Highway 407. In fact, the majority of traffic will proceed along Highway 7 and impact the Brooklin area. It should be recommended that the Ministry, as they have protected all other communities along the Highway 7 route, should propose alternatives to deal with the possible impacts on Brooklin, both along Winchester Road and Highway 12.
2. The design of Highway 407 extension has been limited to four lanes and it is intended that it would be expanded to ten lanes in the future. The construction will require the Province to return to this area and widen the proposed road to an ultimate ten lanes. From a financial point of view this is a cost savings at this time but will add to the costs of the construction in the future. Also, the extension of a four lane highway in this area does not provide confidence to Durham Region and to the Town of Whitby that a further extension of Highway 407 will happen in the short term.

.....2

ITEM NO. 98-97

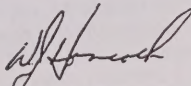
Re: Highway 407/Transitway
Markham Road Easterly to Highway 7, east of Brock Road
Environmental Assessment Report

Page 2

3. The report has suggested that the implementation of the ultimate Highway 407 will be staged over time and dependent upon economic and travel demands. This type of comment leaves the scheduling of Highway 407 open-ended and long term. The Region of Durham and the Town of Whitby should be pressuring the Ministry for a further extension of Highway 407 to accommodate the development in the northern Durham area through Whitby and Oshawa. As it is presently proposed, the Town of Whitby will be faced with the problems of increased traffic volumes and will not be receiving any benefits from a road system that will lead to new development initiatives in the area.
4. It is the Public Works recommendation that the Ministry of Transportation should be encouraged to extend the four lane facility through to Lakeridge Road and to bypass Brooklin and possibly terminate at Thickson Road. To indicate support for their proposal is not beneficial to our community and therefore we should be very strong in our position that a further extension is needed.

These are my comments.

Yours truly,



W.J. HANCOCK, P. Eng.
Director of Public Works

WJH/mr

cc. Wm. H. Waliace, Administrator



Office
des transports
du Canada

Canadian
Transportation
Agency

Environmental Assessment Branch
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JUN 19 1997
To _____ Ea. File # _____
Public Record ☐ Full Text ☐

JUN 12 1997
Ottawa, Ontario
K1A 0H3

RID Code No: INQ0934

Nigel Wood
Senior Review Co-Ordinator
Environmental Assessment Branch
Ministry of Environment & Energy
250 Davisville Avenue
TORONTO, Ont
M4S 1H2

Dear Mr. Wood:

Re: Highway 407/Transit Way (Markham Road to Highway 7 East of Brock Road)

I am writing in response to your letter of April 16, 1997 to Mr. Paul Lacoste of my staff. Thank you for the opportunity to review your Environmental Assessment Report for the above noted project.

I note that the proposed highway will cross CP Rail's Havelock Subdivision (Plate 2 of your Technically Preferred Route Concept Plan). However, you have not provided an application for that crossing or any details of this crossing in your Environmental Assessment Report. Therefore we are unable to comment on this aspect of your project at this time.

I would like to mention that as a result of the proclamation of the *Canada Transportation Act* (CTA) effective July 1, 1996, the National Transportation Agency has continued as the Canadian Transportation Agency (Agency). The CTA has replaced the *Railway Act* and the *National Transportation Act*.

The following describes the types of works and circumstances that require Agency involvement and that trigger an environmental assessment (EA) under the *Canadian Environmental Assessment Act* (CEAA). Your may find this information useful in determining whether Agency involvement will be required in future projects.

- **Construction of New Railway Lines:**

Section 98 of the CTA provides that a railway company shall not construct a railway line without the approval of the Agency. The Agency may, on application of the railway company, grant the approval if it considers that the location of the railway is reasonable, taking into consideration the requirements for railway operations and services and the interests of localities that will be affected by the

.../2

line. The trigger for an EA under CEAA is subsection 98(2) of the CTA that replaces 112(3), 115(1) & (3), 123(1) & (4) and 127(1) of the *Railway Act*.

Note: Agency approval is not required for construction of a line of railway within the right-of-way of an existing railway line or within 100 metres of the centre line of an existing railway for a distance of no more than 3 kilometres.

- **Road and Utility Crossings**

Under section 101(1) of the CTA, the parties may negotiate agreements or amendments to agreements relating to the construction, maintenance or apportionment of costs of a road or utility crossing. They may file such agreements with the Agency. When such agreements or amendments are filed with the Agency, they become orders of the Agency in accordance with subsection 101(2) of the CTA. In such cases, the Agency acts as a registrar and no Agency approvals are involved. Therefore, CEAA is not triggered and no EA is required.

If a person is unsuccessful in negotiating an agreement or amendment, the Agency may, on application under section 101(3) of the CTA, authorize the construction of a suitable road crossing, utility crossing, or related work. The Agency may also specify who will maintain the crossing and determine the apportionment of the costs of constructing and maintaining the crossing. Here the trigger under CEAA would be either subsection 101(3) or (4) of the CTA that have replaced subsections 201(2), 202(1), 212(1), 215(1), and 326(1) of the *Railway Act*.

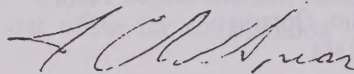
- **Private Crossings**

If a railway company and the owner of the adjacent land do not agree on the construction of a crossing, the Agency, on application of the owner, may order the company to construct a suitable crossing that the Agency considers necessary for the owner's enjoyment. The trigger under CEAA is subsection 103(1) of the CTA that has replaced section 216 of the *Railway Act*.

.../3

The description above does not cover all Agency approvals with regard to rail infrastructure projects. But, it does provide you with an overview of the general types of approvals we now address. Should you or your staff have any questions or wish clarification please contact Mr. Paul Lacoste, Chief of Engineering or Mr. Bill Aird, Senior Environmental Officer at the numbers listed below.

Yours sincerely



Ian C.W. Spear, Director
Rail Infrastructure Directorate
Rail & Marine Branch

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et Océans

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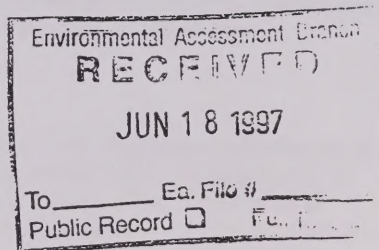
Your file *Votre référence*

Our file *Notre référence*

525-1329

June 12, 1997

Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario
M4S 1H4



Attention: Mr. Nigel Wood

Dear Mr. Wood

**RE: Highway 407 / Transitway Markham Road Easterly to
Highway 7 East of Brock Road**

This will acknowledge that your request for comments regarding the Highway 407 / Transitway, Markham Road Easterly to Highway 7 East of Brock Road Environmental Assessment Report was received by the Department of Fisheries and Oceans, Fisheries and Habitat Management - Ontario Area (DFO-FHM) on April 21, 1997. It has been assigned the following file number and name:

525-1329 Highway Construction, Highway 407 East

Please refer to this on any subsequent correspondence.

My review of the Environmental Assessment Report was limited to potential impacts on fish and fish habitat.

Previous comments on the 'Highway 407 / Transitway, Markham Road Easterly to Highway 7 East of Brock Road, Environmental Assessment Report, Draft for Presubmission Review' were provided to the Ministry of Transportation on January 6, 1997.

The responsibility for the management of fish habitat in Ontario is shared by the Department of Fisheries and Oceans and the Ontario Ministry of Natural Resources (OMNR). A procedure for the review and authorization of activities which may harmfully alter, disrupt or destroy fish habitat has been established by these two agencies. Under agreement with the OMNR, projects that result in the harmful alteration, disruption or destruction of fish habitat are referred to DFO-

FHM for authorization under the *Fisheries Act*. Often, physical impacts on fish habitat can, for the most part, be mitigated by specific modification or actions incorporated into the project design and construction procedures. However, the information provided for the water crossings for this section of Highway 407 is not sufficient to determine whether the crossings will result in a harmful alteration, disruption or destruction of fish habitat. The requirement for *Fisheries Act* authorizations has not been determined at this time. I expect this requirement will be determined when design stage information is available regarding the types of crossings proposed, the construction methods, and the potential impacts to fish and fish habitat relating to any proposed crossing. To date, OMNR has not referred any activities related to the Highway 407, from Markham Road easterly to Highway 7 east of Brock Road, to our office for authorization under the *Fisheries Act*.

Please note that works or undertakings resulting in the harmful alteration, disruption or destruction of fish habitat are prohibited unless Authorized by the Minister of Fisheries and Oceans pursuant to Section 35(2) of the *Fisheries Act*. In keeping with the Department's *Policy for the Management of Fish Habitat* (DFO 1986), no such authorizations are issued unless acceptable measures to compensate for the habitat loss are developed and implemented by the proponent. A decision to issue an Authorization under Section 35(2) of the *Fisheries Act* is a trigger for the *Canadian Environmental Assessment Act*. This means that components of this project will be reviewed under the *Canadian Environmental Assessment Act* if a *Fisheries Act* authorization is required.

We have the following comments relating to the Environmental Assessment Report.

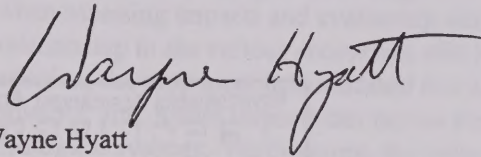
- Several water course crossings are proposed. The details of the watercourse crossing have not been developed. It is not known at this time if the construction methods or the structures proposed will impact fish and fish habitat.
- The best available technology is to be used in the construction of all watercourse crossings.
- Sedimentation and erosion control measures are to be implemented during the construction and site rehabilitation phase, to prevent entry of sediment into the water. All disturbed areas are to be stabilized upon completion of work.
- No inwater work / activity shall occur during spawning, nursery or migratory periods for local fish populations. Timing restrictions for inwater work can be obtained from the Aurora OMNR office. Some flexibility in timing restrictions may be possible, but would be made on a site by site basis. Formal requests for variance on timing restrictions would have to be made to the OMNR for their approval or concurrence.
- All activities, including maintenance procedures, must be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other

deleterious substances into the watercourse. Vehicular refuelling and maintenance must be conducted away from the watercourse and watercourse banks.

- Instream construction is to be carried out in the dry, where feasible, through the use of coffer dams.
- A rehabilitation plan should be developed by the proponent to restore the construction site back to its preconstruction state, or better.
- If it is determined that a *Fisheries Act* authorization is required for a crossing, a habitat compensation plan and a Monitoring Program must be developed by the proponent and approved by DFO-FHM prior to the issuance of the authorization. This Monitoring Program is for post construction monitoring of the mitigation and compensation plan implemented to protect or replace lost fish habitat. Contingency plans may be required to address problems that the monitoring program identifies.
- Stormwater management facilities should be off-line of the watercourse and should deal with water quality and quantity, including temperature and sedimentation.
- The report states that open-bottom culverts/bridges will be considered in groundwater upwelling areas. Note that bridges are preferred in these areas. Open-bottomed culverts are a second choice. Areas of upwelling must be protected through mitigation of impacts.
- Potential impacts to coldwater streams, including water temperature, upwelling areas, groundwater movement and sedimentation must be determined and mitigated.
- It is stated that direct discharge of bridge runoff to a watercourse may be necessary. The proponent must clearly demonstrate where this would occur and why prescribed stormwater management plans can not be employed.
- The report states that the highway requires a minimum 100m ROW and the transitway requires a minimum 60m ROW. It is stated that the ROW's will be parallel to each other. I am not clear on the relationship / proximity these two have to each other relative to the watercourse crossing. How close will these ROW's be to each other? Have cumulative impacts relating to the two ROW's been addressed? The potential impact to the watercourse will increase with the linear distance affected.
- Future lane expansion should allow for openings between the structures. Wide ROW's will negatively impact solar input where continuous bridge / culverts are expected. How or what mitigation will be used to reduce these impacts?
- The Design Phase will detail environmental matters, design criteria for crossings, mitigation measures, Stormwater Management Plan, Monitoring Plan, and an Erosion Control Plan. During this stage ongoing consultation with stakeholders will be held to ensure that environmental concerns are properly addressed. Details are not available at this time. However, there is a commitment for future studies and mitigation of potential impacts.

I will provide further comments when more information is available relating to potential impacts of this project on fish and fish habitat.

Should you have any questions or comments, please contact me at (905) 336-6236 or FAX (905) 336-4819.



Wayne Hyatt
Fish Habitat Biologist
Fisheries and Habitat Management-Ontario Area

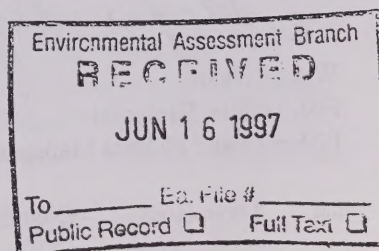
c.c. Dave Ross - OMNR, Aurora
Al Robertson - CCG
Rob Dobos - EC
Keith Grady - CEA Agency
Paul Lacoste - NTA
Bruce Farrow - TC

ENVIRONMENTAL PLANNING AND ANALYSIS BRANCH

PHONE: (416)314-7014

FAX: (416)314-0444

June 9, 1997



MEMORANDUM

To: Nigel Wood
Environmental Assessment Branch

From: Jim Clifford, Manager
Environmental Planning Section

**RE: MTO HIGHWAY 407/TRANSITWAY ENVIRONMENTAL ASSESSMENT
- MARKHAM ROAD TO HIGHWAY 7 EAST OF BROCK ROAD**

We have completed our review of the above noted document and provide the following comments. The review is based on the requirements of the Environmental Protection Act, the Ontario Water Resources Act, the Pesticides Act, the Ministry of Energy Act, and associated policy and program areas. This Ministry's technical areas of responsibility include air quality, groundwater and surface water quality and quantity, waste management/disposal issues, noise, land use compatibility, pesticides use and this Ministry's energy policies. The Central Region Office, the Ecosystem Science Section and the Noise Assessment Unit have provided input on this review.

In January of 1997, staff provided detailed comments on the draft Environmental Assessment. Many of the issues and concerns raised in the review of the draft have been addressed in the final EA submission. Subsequently, the following comments and accompanying terms and conditions are for clarification.

ECOSYSTEMS

1. Section 4.2.7 of the document discusses a number of ecosystem considerations within the study area. The proponent has recognized that ecosystem principles should be considered when assessing impacts and evaluating alternative routes. The EA states that functional relationship in the various ecosystem will be considered during the design process. In addition, the proponent has indicated that sensitive ecosystems will be avoided where possible, and, where impacts can not be avoided, there is a need to minimize impacts to ecological systems. Furthermore, the proponent has committed to involving appropriate stakeholders such as MOEE in the preparation of the design and construction reports. This approach is acceptable and we encourage the proponent to incorporate these principles and linkages in future EA submissions. Staff note there is updated hydrogeology information available in existing watershed and subwatershed plans in the area that should be considered in the design process for water quality and quantity issues.

WATER QUALITY, QUANTITY, MITIGATION AND MONITORING

1. A number of concerns regarding water quality and quantity as well as mitigation and monitoring had been identified by staff in the review of the draft EA. Although some of the information has now been provided in the formal EA, the proponent is proposing to address the detailed concerns through the preparation of design and construction reports. The design and construction reports will include consultation with appropriate stakeholders, including this Ministry, and will deal with issues such as water quality and quantity, noise, stormwater run off, erosion, contaminated materials, and well impacts as well as monitoring and mitigation. Based on the information provided, MOEE Technical Review staff find this approach acceptable. As a point of clarification, the proponent is to consult with the Central Region office of this Ministry on the technical reports. Therefore, we recommend the following condition:

“The Design and Construction reports are to be submitted to the Director of the Central Region Office of the Ministry of Environment and Energy a minimum of 90 days prior to the commencement of construction.”

NOISE

1. Staff are generally satisfied that with proponent's approach to dealing with noise issues. However, the following term and condition is required to address noise concerns related to the transitway:

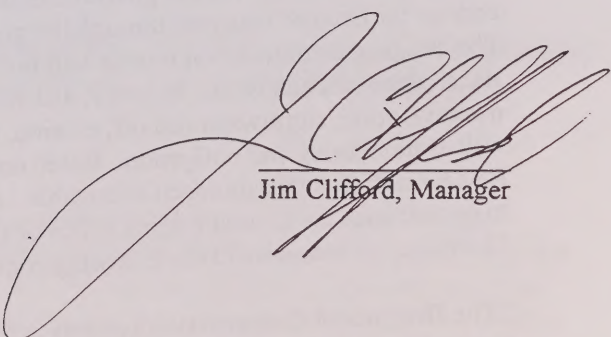
“That during the design phase, the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit stations, the maintenance/storage yards and the commuter parking lots shall be decided on in

consultation with the Noise Assessment Unit of the Ministry of Environment and Energy.” and

“That the sections of the Design and Construction reports dealing with noise and vibration shall be submitted to the Director of the Approvals Branch a minimum of 90 days prior to construction.

The Report shall be subject to approval by the Director and shall, in addition to the analysis of the operational noise impacts and the inclusion of proposed noise control measures, provide documentation on: (a) the measures which will be taken to minimize the noise and vibration impacts generated by pile driving and blasting operations should requirements for such operations be identified in the design stage, and (b) the resultant increases in operational noise levels along the roadways leading to/from the facility (e.g. in the Greenwood Community) , the measures which will be taken to minimize the increases in noise levels and the anticipated effectiveness of these measures.”

If you have any questions, please contact Elizabeth Janz, the Technical Review Coordinator, at (416) 314-7112.



Jim Clifford, Manager

cc. B. Nixon
M. Plewes
C. Krajewski
R. Ryan



TRANSPORTATION AND WORKS DEPARTMENT
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Visit us at our web site on the internet: <http://www.region.york.on.ca>

June 6, 1997

Mr. Nigel Wood
Environmental Assessment Branch
Ministry of Environment and Energy
250 Davisville Avenue, 5th Floor
Toronto, Ontario
M4S 1H2

Dear Mr. Wood:

Re: Highway 407/Transitway (Markham Road Easterly to
Highway 7 East of Brock Road) Environmental Assessment
EA File No. TC-CE-02

The Council of The Regional Municipality of York, at its meeting held on May 22, 1997 adopted, without amendment, the appended Clause No. 3 contained in Report No. 11 of the Transportation and Works Committee, entitled "Highway 407 East Extension, Environmental Assessment Study".

Regional Council, by adoption of the foregoing clause, has endorsed the Ministry of Transportation's Environmental Assessment Report for "Highway 407/Transitway, Markham Road easterly to Highway 7 east of Brock Road".

Sincerely,

A handwritten signature in black ink, appearing to read "Loy Cheah".

Loy Cheah, P. Eng.
Transportation Engineer

LC/vm

File: c:\cheah\h407rev.doc

Attachment: 1

THE REGIONAL MUNICIPALITY OF YORK

Clause No. 3 embodied in Report No. 11 of the Transportation and Works Committee which was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting on May 22, 1997.

3

HIGHWAY 407 EAST EXTENSION ENVIRONMENTAL ASSESSMENT STUDY

The Transportation and Works Committee recommends the adoption of the following report, April 25, 1997, from the Commissioner of Transportation and Works:

1. Recommendations

It is recommended that:

1. the Ministry of Transportation Environmental Assessment Report for "Highway 407/Transitway, Markham Road easterly to Highway 7 east of Brock Road" be endorsed;
2. Region of York request the Ministry of Transportation to continue to fast-track the implementation of the Highway 407 east extension from Markham Road to Brock Road with construction to begin in 1997; and,
3. copies of this report be distributed by the Regional Clerk to the Ministry of Transportation, Town of Markham and Region of Durham.

2. Background

The Ministry of Transportation initiated the Highway 407 East Partial Extension Feasibility Study in Spring 1996. An information report on this study was received by Regional Council on April 11, 1996. This study examined the feasibility of fast-tracking an extension of Highway 407 east of Markham Road as a way of resolving traffic concerns related to the planned 1998 opening of Highway 407 to Markham Road.

A progress report was adopted by Regional Council on November 14, 1996, which recommended support for the Highway 407 East Partial Extension Feasibility Study and the process to fast-track the Environmental Assessment Study.

Following the feasibility study, the Ministry of Transportation proceeded with the Environmental Assessment (EA) for an extension of Highway 407 from Markham Road to the Highway 7/Brock Road area. The EA study is now complete and the Environmental Assessment Report (EAR) has been filed into the record for public review until June 6, 1997.

Clause No. 3
Report No. 11
Transportation and Works

3. Discussion

The Environmental Assessment Study recommends:

- an interim four-lane extension of Highway 407 from Markham Road to Brock Road,
- protection of a 100 metre corridor for a basic 10-lane freeway facility,
- protection of a 60 metre corridor for a higher order transit facility which parallels Highway 407,
- protection for full freeway interchanges at Markham Road, 9th Line, future Markham By-Pass, York/Durham Line and Brock Road.

Initially, the interchanges at 9th Line and the future Markham By-Pass will only be partial interchanges, providing moves to and from the north. A map indicating the preferred route for the extension is attached.

The Ministry of Transportation hopes to secure the Ministry of Environment and Energy (MOEE) EA approval for the project soon after the June 6, 1997 deadline and construction of the Highway 407 extension is planned to begin in late 1997 or early 1998.

The opening of the second phase of Highway 407 west of Markham Road is planned for 1998. The sooner the extension of Highway 407, east of Markham Road, can proceed and be implemented, the lesser would be the impact to Markham Village.

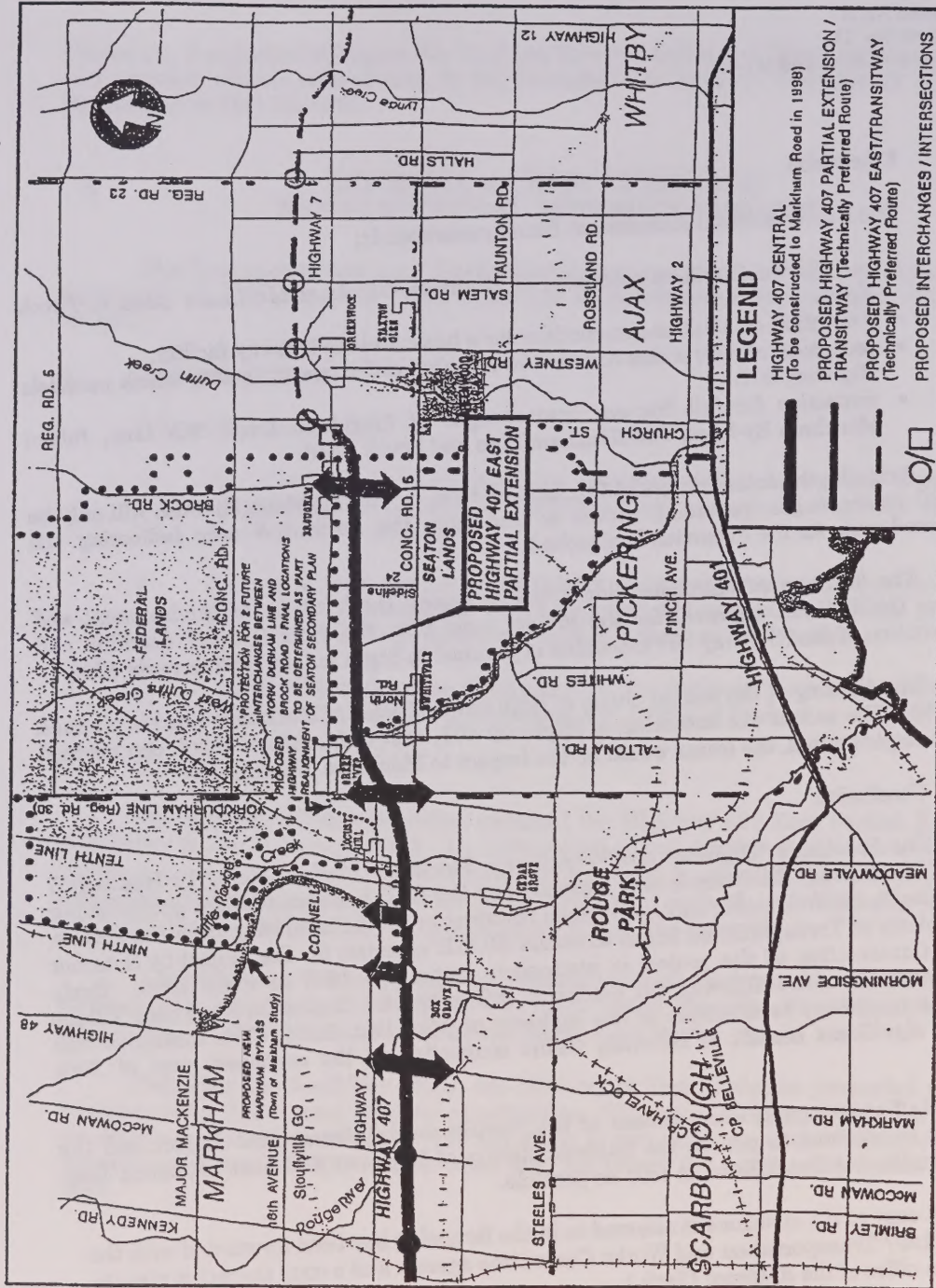
4. Conclusion

The Province's "Highway 407/Transitway, Markham Road Easterly To Highway 7 East of Brock Road" EA Study is now complete and the EAR has been filed for public review until June 6, 1997. Barring any unforeseen concerns or problems arising from the review, the Ministry of Transportation hopes to secure MOEE approval for the project by Summer 1997. Construction of the project is planned to begin late 1997 or early 1998. Early implementation of the Highway 407 extension will reduce the impact on Markham Village from the temporary termination of the highway at Markham Road. The extension will provide significant benefit to relieving traffic congestion in the southeast part of York Region.

Staff recommends endorsement of the Environmental Assessment Report and the Province to continue to pursue the implementation of Highway 407 east extension from Markham Road to Brock Road as soon as possible.

(A copy of the attachment referred to in the foregoing has been forwarded with the May 14, 1997 Transportation and Works Committee agenda and a copy thereof is also on file in the office of the Regional Clerk.)

36



EXHIBIT

5024

HIGHWAY 407 TO HIGHWAY 7
EAST OF BROCK ROAD

ATTACHMENT - 1

HIGHWAY 407 / TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

Ministry of
Natural Resources

Ministère des
Richesses naturelles

50 Bloomington Road West
Aurora, Ontario
L4G 3G8

June 6, 1997

MEMORANDUM TO:

Ministry of Environment and Energy
Environmental and Assessment Branch
250 Davisville Avenue
Toronto, Ontario
M4S 1H2

Attention: Mr. Nigel Wood, Senior Review Coordinator

Subject: Highway 407/Transitway (Markham Road Easterly to
Highway 7 East of Brock Road)
EA File No. TC-CE-02

As per your letter of April 16, 1997 requesting comment on the Environmental Assessment Report (EAR), the following information is provided:

In many parts of the EA an appropriate amount of detail has been presented. In other areas where further detail is required reference is made by MTO to the Stakeholder Consultation Process (SCP). The ministry endorses the concept of the SCP, a design, input, review process involving stakeholders listed in the EA.

This ministry finds that additional information and commitments are required regarding: 1/groundwater, 2/access and service roads, 3/maintaining permanent riparian separations between eastbound and westbound lanes to accommodate wildlife passage at stream crossings, 4/establishment of priorities for monitoring highway impacts, 5/guarantees for trails in areas as designated by municipalities, conservation authorities, and other planning authorities. Clarification is required for 6/Official Plan resolutions re: Finch Avenue and Rossland Road. There are also questions relative to the transitway adjacent to the highway (7), and interpretation of fisheries and wildlife data (8). Most structures at crossings will be determined during the SCP (9).

1/after "(see exhibit 4.2.3)", EAR pg 4-6, a sentence had been present in a previous draft of the EAR: "The original source data used to determine high water tables in this study were not identified, so one must use this data with caution". The draft document implied that further studies are warranted. This

.../2

ministry should be consulted on any issues that relate to the water table or ground water to guarantee that fisheries concerns are addressed.

As previously indicated to MTO, many of the watercourses crossed by the Highway 407 and immediately downstream of the proposed Highway 407 are highly sensitive first order streams, headwaters of streams supporting resident and migratory salmonid fish species of Lake Ontario. All fisheries related matters will be addressed by MNR in the context of watershed, and not specifically to the Highway 407 ROW. All stormwater facilities should be designed to minimize increases in water temperature, maximize removal of contaminants and prevent sediment input to receiving water bodies. Stormwater inputs to receiving water bodies must take into consideration losses in natural groundwater storage, and impacts to base flow of affected streams. For the statement on pg 6-30 of the EAR "where feasible, closed bottomed culverts will not be used in upwelling areas" please note that this ministry expects that open bottomed culverts and bridges would be required in upwelling areas to protect ground water function.

A commitment to conduct hydrogeological studies should be made with input/comment from the Ministry of the Environment to prevent negative impacts to significant coldwater fisheries along/ and immediately downstream of the proposed Highway 407 corridor. Hydrology concerns must be addressed to accommodate fisheries sensitivities, and particular attention must be given to the Urfe and Ganatsekiagon watersheds. The loss of ground water infiltration at these locations will have a profound effect on baseflow conditions serving fisheries downstream, and BMP's that address groundwater losses in recharge should be investigated. Please note that the EA does not presently include detailed comments relative to hydrology studies of the Seaton Lands, Interim Waste Management, or Previous Oak Ridges Moraine studies. Issues relative to groundwater recharge/discharge /horizontal movement as a minimum must be reviewed with regulatory agencies, and should also be discussed with Stakeholders referred to in the EAR.

2/"access roads", EAR pg 1-7, and service roads. Impacts of access roads required to complete the undertaking have not been presented in the EA document. This ministry requires that MTO or its assigns must resolve access road issues with stakeholders to protect natural environment features. Impacts of permanent service roads have not been detailed in the Environmental

Assessment documents. What will be the changes to Highway 7 east of Brougham? This ministry requires more details and discussion should take place using the SCP.

3/"phasing of the ultimate 10 lane highway cross section to respond to traffic demands", EAR pg 1-7. The highway must be designed to leave a permanent light window between highway bridge structures. Light windows are important for maintaining natural features at valley/stream crossings, and in reducing negative tunnel effects to fish and wildlife migration.

4/"Monitoring with the commitments to further work", EAR pg 1-10. Monitoring is often used to determine impacts and effectiveness in design, and is reflected in Quality Assurance and Quality Control reporting. If environmental considerations in design do not prove effective, commitments to further work may be required.

Monitoring should take into account present day monitoring programs of MOE and MNR for groundwater, contaminants, invertebrates, fisheries.

Monitoring should also take into account activities of facility construction and staging of construction. Pg 5-43 of the EAR states that "although there are significant potential impacts related to the river/valley crossings, these impacts are associated with the facility construction and not the staging of this construction". Please note that this ministry believes that staging of construction can have significant impacts.

5/"Trails", EAR pg 4-18, The highway should give consideration for recreational trails at specific crossings that may be requested by municipalities, conservation authorities and MNR.

6/"Recently a proposed connection between Finch Avenue and Rossland Road has been removed from the Metropolitan Official Plan and approved for removal from the Durham Official Plan by Durham Council", EAR pg 2-11. On pg 2-29 "the Durham Official Plan depicts east-west arterial roadway facilities...". This appears to conflict with the statement on 2-11.

7/Impacts of the transitway adjacent to the Highway 407 cannot be fully realized until designs for the Highway 407 are completed. Issues such as impacts to wildlife corridors, loss of riparian and fisheries habitat, through bridge designs and culvert extensions, as well as mitigation ie. stormwater, should also be extended to include "Construction of a Transitway in a separate corridor adjacent to Highway 407", EAR pg 6-9, and included in the Stakeholder Consultation Process.

.../4

8/Interpretation of collected fisheries and wildlife data may be different depending upon the approach taken to apply the information at hand. For example: "The area had been identified as a deer yard, but this is not corroborated by MNR (1983a): a deer yard, per se, is unlikely, but this is a significant area of winter deer concentration", EAR page 4-20. Irrespective of whether the area is a deer yard or not, significant valleylands/wildlife habitats must be protected, particularly in the Whitevale corridor ESA, which serves as an access node for deer to the Seaton lands.

Please note that fish are presently prevented from migrating upstream toward AL1400, and AL1420, due to a dam and drop culvert at Concession 5, Pickering Town Mun., a short distance downstream of the proposed Highway 407. On May 28, 1997 two rainbow trout were captured at Concession 5 below the culvert outlet, downstream of AL1420. The Fisheries Inventory report (Appendix 19.6) reflects conditions within and near the ROW and for AL1400 and AL1420, finding no fish species, states low habitat significance, and states that no fishery is directly supported. Conclusions of the MTO Fisheries Report are more specific to observations in/nearer to the geographical location of the Highway 407 (within and directly above and downstream of the proposed Highway 407). Environmental values further downstream of the ROW must be taken into consideration when determining impacts. MNR has had the opportunity to provide such comments in previous correspondence. (The EA acknowledges that MNR will be looking at system function and potential impacts during the design process).

As landscape features at Concession 5 are suitable for conveying wildlife (incised, moderate to dense forest canopy) a structure designed to move wildlife under the Highway 407 would be appropriate at one of the AL1400 and AL1420 locations, even though the 407 may be moving across table lands, to the north of the incised valleys. This will require further discussion during the SCP/design build exercise.

Please also note on pg 6-33 of the EAR the title "Corridors may also have negative effects". "Corridors" replaced with "highway crossings", may be more appropriate.

On pg 6-21 of the EAR, the table comment "significant wildlife" should be used with caution when determining wildlife sensitivities to determine crossing designs. "Significant habitat" may serve many species of wildlife that may be common, using the habitat feature. Interpretation of impacts to wildlife

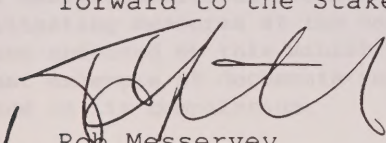
will also change, as wildlife is forced to move parallel to the constructed highway, relative to the number of crossings.

9/With the exception of bridges already indicated by MTO, all other crossings shall have structure design selection at crossings determined during the SCP. This does not rule out the need for bridges, open bottomed and widened culverts at other locations. With the exception of bridges already indicated by MTO in Table 6.6.1 there should be no preset conditions on structure type at stream crossings.

On Pg 6-29 of the EAR the statement "avoid the placement of piers within the watercourse channel under bankfull flow conditions", appears to be confusing. This ministry believes that the original intent of referring to bankfull was to delineate a point of preference for limiting construction activity, not limiting conditions for undertaking the activity.

This ministry finds that the EAR has addressed many issues of concern relative to route planning, and identification of the need to mitigate impacts to fish and wildlife, and other natural environment features, during design. The intent of the SCP within the EAR to offer participation by stakeholders such as the Rouge Park Alliance in the design process is commendable. The SCP will offer an opportunity to review natural environment features/sensitivities such as valley corridors with public participation.

This ministry on the condition that the preceding comments are taken into account finds the EAR suitable for moving the project forward to the Stakeholder Consultation/Design Build Process.



Rob Messervey
District Manager
Aurora District
(formerly Maple/GTA District)

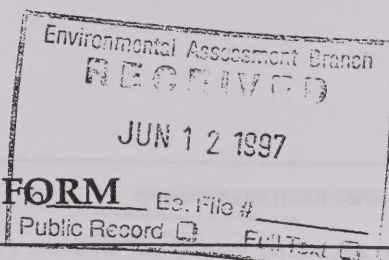
/DJR

cc: Don Haley, MTRCA
Wayne Hyatt, DFO
Ron Christie, RPA
Glenn Price, MNR
Tim Rance, MNR
Mark Heaton, MNR



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie



COMMENT SUMMARY FORM

EA Title:	Highway 407/Transitway (Markham Road Easterly to Highway 7 East of Brock Road)
Proponent:	Ontario Ministry of Transportation
Submitted:	April 16, 1997
Comments Due:	June 6, 1997
Agency:	Ministry of Natural Resources
Reviewer Name and Title	David J. Ross, Highway 407 Biologist MNR Aurora Office
☒ No Concerns (conditional) ☐ Concerns	
Summary Statement (highlight issues/comments) *No concerns provided consideration given to final comments. The attached letter contains relevant points/comments regarding the Environmental Assessment Report submission. The following answers are specific to questions one through seven as per attachment #1. 1. This ministry finds that the EA covers relevant issues with varying levels of detail that will be supplemented with information during the design process. It is expected that mitigating measures will be developed and refined during the Stakeholder Consultation Process (SCP) in a process similar to that of the design build of Highway 407 Central and as design/conditions dictate. The SCP will offer an opportunity to identify specific mitigating measures at the design level. The route planning of the highway has already been endorsed by this ministry. The analysis of the EA is logical, and it is understood that excerpts of documents relating to original plans for Highway 48 to 35/115 have been used in its compilation. 2. MTO has used an appropriate number of alternatives in the EA, and as evidenced in the reporting on route planning accommodated earlier concerns for alignment shifts based on environmental and cultural (park) features. 3. Monitoring and contingency plans will be further developed and discussed during the SCP. The SCP identifies mechanisms for participation and areas to be addressed during design and construction. (continued on reverse)	

~~Proposed Conditions (Heavy)~~

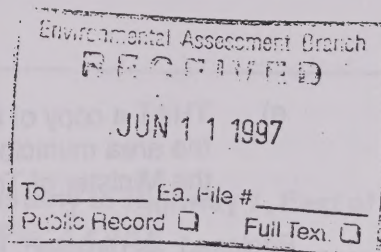
4. The intended means of MTO to implement the undertaking is satisfactory with the EAR and demonstrates a recognition of this ministry's (MNR's) legislative requirements and responsibilities.
5. MTO has indicated that compliance reporting will include reporting to both the SCP and relative regulatory agencies such as this ministry.
6. The undertaking is satisfactory relative to other aspects reviewed and considered in the EAR, based on attempts to minimize environmental impacts through recognition of fish and wildlife/natural environment features. Site specific issues may be resolved during the SCP.
7. The Ministry of Natural Resources participated in the route selection, and aquatic/terrestrial resource inventory review functions of the EA process. MTO and its consultants have made accommodations for many of the suggestions/comments provided by this ministry. It is recognized that the design/build concept of the highway will provide an opportunity to deal with specific details relative to design impacts and mitigation.

Please Forward Comments by **June 6, 1997** to:

Nigel Wood
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario
M4S 1H2
fax (416) 440-3771



June 5, 1997



The Regional
Municipality
of Durham

Clerk's Department

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P.M. Madill, A.M.C.T.
Regional Clerk

Mr. Paul Jankowski
Project Director
Highway 407 East
Ministry of Transportation
3rd Floor, Atrium Tower
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

**Highway 407/Transitway, Markham Road Easterly to Highway 7, East
of Brock Road - Environmental Assessment Report**
Our File: E03-00

Mr. Jankowski, the Planning Committee of Regional Council considered the above matter and at a meeting held on June 4, 1997, Council adopted the following recommendations of the Committee:

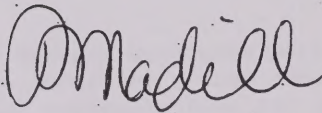
- "a) THAT the Environmental Assessment Report for the extension of Highway 407/Transitway, from Markham Road (Highway 48) to Highway 7, east of Brock Road, be endorsed;
- b) THAT the Ministry of Transportation be requested to assess the feasibility of implementing a by-pass of Green River, when Highway 7 is relocated as part of the Highway 407 extension;
- c) THAT the Ministry of Transportation be requested to commence construction of the Highway 407 interim extension at the earliest opportunity;
- d) THAT the Ministry of Transportation be requested to reactivate the Environmental Assessment study for the remainder of the Highway 407 east extension through Durham Region; and

2/....



- e) THAT a copy of Commissioner's Report #97-P-70 be forwarded to the area municipalities, the Ministry of Environment and Energy, the Minister of Transportation, and Durham Region M.P.P.s."

Enclosed, as directed, is a copy of Report #97-P-70 of Mr. A.L. Georgieff, Commissioner of Planning.



P.M. Madill, A.M.C.T.
Regional Clerk

PMM/db
Encl.

cc: Mr. M. de Rond, Clerk, Town of Ajax
Mr. G.S. Graham, Clerk-Administrator, Township of Brock
Ms. P.L. Barrie, Clerk, Municipality of Clarington
Mr. B. Suter, Clerk, City of Oshawa
Mr. B. Taylor, Clerk, Town of Pickering
Mr. E.S. Cuddie, Clerk-Administrator, Township of Scugog
Mr. W.E. Taylor, Clerk, Township of Uxbridge
Mr. D.G. McKay, Clerk, Town of Whitby
Mr. N. Wood, Review Coordinator, Environmental Assessment
Branch, Ministry of Environment and Energy
The Honourable J. Ecker, M.P.P. (Durham-West)
Ms. J. Munro, M.P.P. (Durham-York)
Mr. J. Ouellette, M.P.P. (Oshawa)
Mr. J. O'Toole, M.P.P. (Durham-East)
Mr. J. Flaherty, M.P.P. (Durham-Centre)
Mr. A.L. Georgieff, Commissioner of Planning



Planning Department
Commissioner's Report to Planning Committee
Report No. 97-P-70
Date: May 27, 1997

SUBJECT

Highway 407/Transitway, Markham Road Easterly to Highway 7, East of Brock Road - Environmental Assessment Report, File: 4.4.18.6

Correspondence No. 97-195, dated April 16, 1997, from Mr. Nigel Wood, Review Coordinator, Ministry of Environment and Energy

RECOMMENDATIONS

1. THAT the Environmental Assessment Report for the extension of Highway 407/Transitway, from Markham Road (Highway 48) to Highway 7, east of Brock Road, be endorsed;
 2. THAT the Ministry of Transportation be requested to assess the feasibility of implementing a by-pass of Green River, when Highway 7 is relocated as part of the Highway 407 extension;
 3. THAT the Ministry of Transportation be requested to commence construction of the Highway 407 interim extension at the earliest opportunity;
 4. THAT the Ministry of Transportation be requested to reactivate the Environmental Assessment study for the remainder of the Highway 407 east extension through Durham Region; and
 5. THAT copies of Commissioner's Report No. 97-P-70 be forwarded to the area municipalities, the Ministry of Environment and Energy, the Minister of Transportation, and Durham Region M.P.P.s.
-

REPORT1. Purpose of this Report

- 1.1 The Ministry of Transportation (MTO) has completed the Environmental Assessment (EA) study for the extension of Highway 407, east from Markham Road to Highway 7, east of Brock Road. This report provides an overview of the EA report completed for the study and examines the implications of the study recommendations to Durham Region.

2. Overview of Highway 407 Interim Extension EA Report

- 2.1 On October 15, 1996, Joint Report No. 96-J-21 advised Planning and Works Committees that MTO was initiating an EA study for an interim extension of Highway 407, from Markham Road to Highway 7, east of Brock Road. This interim extension, illustrated in Attachment 1, was proposed to address traffic-related impacts expected to occur when Highway 407 opens to Markham Road in 1998. The report outlined the rationale and process for the EA study, and identified potential implications to the Region of the extension.
- 2.2 Since that time, MTO has completed the EA study and submitted the report to the Ministry of the Environment and Energy (MOEE) for approval. The Executive Summary of the report is appended as Attachment 2. As part of their circulation process, MOEE has requested the Region's comments on the document. This correspondence is provided as Attachment 3.
- 2.3 The EA report documents the need and justification for the extension of Highway 407, and its associated Transitway, east from Markham Road. The study concluded that Highway 407 should be extended to address immediate and long term transportation needs at the Durham - Metro/York boundary. The EA report also states that implementation of the ultimate Highway 407 will be staged over time, depending on economic considerations and travel demands. This will involve:
- in the short term, extending Highway 407 east of Markham Road as a four-lane facility. This addresses traffic problems on Highway 7 and Markham Road, and in the communities of Box Grove, Green River, Locust Hill, Whitevale, Brougham and Greenwood, resulting from the opening of Highway 407 west of Markham Road. At-grade

intersections and partial ramping may be provided at certain locations as interim measures; and

- ultimately, providing a ten-lane Highway 407 and a higher-order transit facility, such as a dedicated bus lane or a light rail line, adjacent to the freeway. The freeway and Transitway will be needed to accommodate anticipated auto and transit travel demands in this corridor.

2.4 Based on these conclusions, the EA report seeks approval to protect adequate right-of-way for a ten-lane freeway and Transitway, and to construct, in stages, Highway 407 and a higher-order transit facility, from Markham Road to Highway 7, east of Brock Road. This includes:

- constructing full interchanges at Markham Road, 9th Line, and Markham By-pass in the Town of Markham; at the Durham-York Line (Regional Road 30); and at Brock Road (Regional Road 1) in the Town of Pickering. Full interchanges will also be provided at two locations between Regional Road 30 and Brock Road, which will be determined at a later date through the Seaton planning process;
- realigning Highway 7 in the vicinity of Regional Road 30, to allow for the Regional Road 30/Highway 407 interchange;
- reconstructing Highway 7 east of Brougham to provide a connection between Highway 407 and Highway 7;
- constructing grade separations at North Road, Sideline 24, and Sideline 16 in Pickering; and at 10th line and the CPR Havelock Subdivision west of the Little Rouge Creek in Markham; and
- closing all north-south roads crossed by Highway 407, where interchanges and grade separations are not provided.

2.5 In a traditional EA report, preliminary designs for the facility are typically prepared to identify the mitigating measures required to address environmental, cultural or other impacts. For this EA, MTO is proposing to undertake a combined preliminary and detailed design phase, once approval is granted. With MTO's intention to stage the design and construction of Highway 407, this approach will ensure that the most up-to-date mitigation

practices are incorporated into the design at the time of construction, and will allow accelerated timelines for construction to be achieved.

- 2.6 To ensure the specific environmental concerns of the affected parties are considered in the subsequent design phase, a stakeholder consultation process and public information centres are proposed. The areas of concern which will be examined in detail are noted in the EA report.

3. Implications to Durham Region

- 3.1 The interim extension of Highway 407, from Markham Road to Highway 7, east of Brock Road, is an important first step in completing the freeway network in the Region, and provides needed transportation capacity across the Durham - Metro/York boundary. The extension follows the technically-preferred route endorsed by Regional Council in 1991 (Joint Report No. 91-J-31), and terminates at an interim location that poses minimal impact on the established rural hamlets.

- 3.2 Notwithstanding the above, there are issues that remain to be addressed:

Brock Road Interchange Location

The Durham Regional Official Plan (ROP) designates a future Brock Road by-pass, east of Brougham. This by-pass will be required to ensure Brock Road can provide Type A arterial road service, once the Brock Road/Highway 407 interchange and the future airport are implemented. At present, the exact location of this by-pass is not known.

Maps in the EA report schematically locate the Brock Road/Highway 407 interchange on the existing Brock Road alignment. The report indicates that the designs are conceptual and subject to preliminary design modifications and approvals. It also states that early in the design phase, interchange placement and configuration issues will be addressed.

Further discussion with the Regional Works Department and MTO is required to determine the preferred location for the Brock Road by-pass of Brougham and the Brock Road/Highway 407 interchange.

Relocation of Highway 7

Highway 7 presently follows Regional Road 30 for a short north-south section along the Durham-York boundary. The EA report proposes the relocation of Highway 7 in this area for a short section between Green River, in Pickering, and Locust Hill, in Markham, to accommodate the Regional Road 30/Highway 407 interchange. However, the proposed realignment will not result in a by-pass of these two hamlets. As a result, the hamlets will continue to experience significant traffic volumes, even with the Highway 407 extension.

A Highway 7 by-pass of Green River is not identified in the ROP. However, at the request of the Town of Pickering, a ROP amendment is presently being considered to designate this by-pass, as it is identified in the Town's Official Plan.

Given that the relocation of Highway 7 is required to facilitate the construction of Highway 407, implementing by-passes of Green River and Locust Hill at the same time may result in positive benefits. Without predetermining the merits of the ROP amendment application, MTO should be requested to assess the feasibility of implementing these by-passes, when Highway 7 is relocated as part of the Highway 407 extension. Further discussion on the merits of the by-passes is also required with the Region of York and Town of Markham.

Interchanges and Grade Separations in the Seaton Area

The ROP designates two interchanges with, and three grade-separated crossings of, Highway 407 in the Seaton area. The EA report references the two interchanges, and indicates that their locations will be determined through the Seaton planning process. The Regional Planning Department, as a participant in the Seaton studies, will continue to ensure that the locations of these facilities adequately address Regional interests.

Grade separations at North Road and Sideline 24 are identified in the EA report for this area. A third grade separation is not proposed at this time, but could be considered at a later date, subject to need and financial considerations.

Additional North-South Transportation Capacity

As noted in the Transportation Priorities Report of February, 1997 (Joint Report No. 97-J-2), the nearly completed widening of Highway 401 and the interim extension of Highway 407, both to Brock Road, will influence local and regional travel patterns in two ways. Firstly, the availability of these facilities will alter travel routes, resulting in a redistribution of traffic volumes on the arterial road system. Secondly, the absence of a high speed linkage between the two freeways will place additional stress on the existing arterial roads, which will be used as linkages between Highways 401 and 407. This demand may necessitate the widening and realignment of facilities, such as Brock Road and Westney Road, at Regional expense.

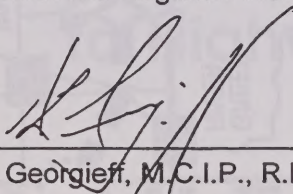
Continued monitoring of transportation conditions in this area, and the timely implementation of the Region's transportation priorities, as identified in Joint Report No. 97-J-2, will assist in identifying and alleviating these concerns. Any Regional road improvements required will be addressed through the annual capital budget process.

4. Conclusions

- 4.1 The conclusions and recommendations presented in the *Highway 407/Transitway, Markham Road Easterly to Highway 7, East of Brock Road Environmental Assessment Report* pose minimal implications to Durham. It is, therefore, recommended that the EA report be endorsed, and the Ministries of Environment and Energy and Transportation be advised. Notwithstanding, further discussions are required with MTO and other affected parties to confirm the Brock Road interchange location and the feasibility of Highway 7 by-passes of Green River and Locust Hill. Planning Committee will be kept informed of these discussions.
- 4.2 The extension of Highway 407 through Durham will provide significant economic benefits to the Region and is critical to achieving many of the urban structure and quality of life objectives stated in the ROP. As the first step in the Highway 407 expansion program, the interim extension from Markham Road to Highway 7, east of Brock Road, should be supported. Although this is an important milestone, Regional Council should continue to pursue the expedited extension of Highway 407/Transitway easterly through Durham. This will require MTO to reactivate the EA study for the remaining portion of

Highway 407 easterly to Highway 35/115, including the interconnecting freeways.

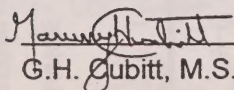
- 4.3 The EA report emphasized that the ultimate Highway 407 extension is only one component of the long term strategy needed to satisfy travel demands at the Durham-Metro/York boundary. As noted in the EA report, and in other reports presented to Planning Committee (95-P-105, 96-P-117), a combination of roadway, transit and transportation demand management measures, such as improved live-work relationships, will be required to address longer term needs. On-going monitoring of development activity and transportation trends will assess how well this combination of measures is addressing transportation challenges in this critical location.
- 4.4 This report has been discussed with the Regional Works Department, who concur with its contents.



A.L. Georgieff, M.C.I.P., R.P.P.
Commissioner of Planning

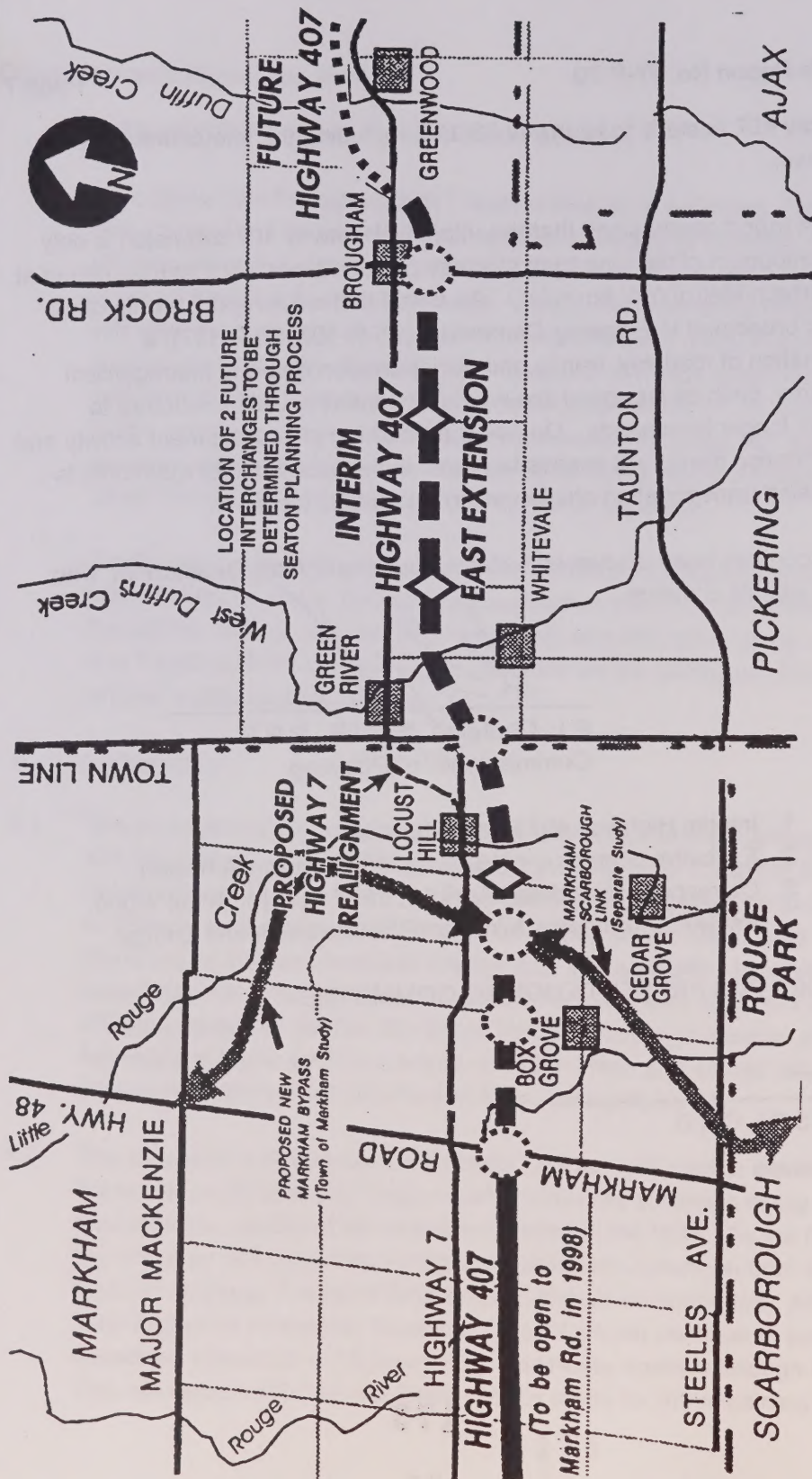
- Attachments:
1. Interim Highway 407 East Extension
 2. Executive Summary of Highway 407/Transit EA Report
 3. Correspondence dated April 16, 1997 from Mr. Nigel Wood, Review Coordinator, Ministry of Environment and Energy

RECOMMENDED FOR PRESENTATION TO COMMITTEE



G.H. Gubitt, M.S.W., C.A.O.

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Legend



INTERCHANGE

GRADE SEPARATION

INTERIM HIGHWAY 407 EAST EXTENSION



Ontario

Ministry
of
Transportation

Highway 407 / Transitway Markham Road Easterly to Highway 7 East of Brock Road

Environmental Assessment Report

EXECUTIVE SUMMARY

A. BACKGROUND & HISTORY

Highway 407 (see Exhibit 1) was initially considered during the 1940s and 1950s and, since that time, has been incorporated into the planning of all major transportation and land use decisions, for what is now known as the Greater Toronto Area (GTA).

In the early part of 1990, the Ministry of Transportation (MTO) carried out a Route Planning study to identify a technically preferred route for Highway 407/Transitway between Markham Road and Highway 35/115. This Route Planning Study evaluated several route alternatives on the basis of a broad range of environmental effects in consultation with affected agencies, municipalities and the public. The study identified a technically preferred route for the facility.

The original schedule for the construction of Highway 407 between Highway 403 in Oakville and Highway 35/115 in Clarington, anticipated a program that would meet the traffic demand without adversely affecting the local road system. However, in the early 1990's the construction of Highway 407 was accelerated when the Province announced a contract to develop, design and build Highway 407 from Highway 403 in the City of Mississauga to Markham Road in the Town of Markham. Under this accelerated program, the Highway 407 contract requires Highway 407 to be completed to Markham Road by the end of 1998. With the acceleration of the construction program for Highway 407 west of Markham Road, the construction of Highway 407 immediately east of Markham Road would not occur in

time to address significant traffic problems in the Markham area.

In early 1996, the Ministry evaluated the feasibility of ways of addressing the traffic concerns related to the planned 1998 completion of Highway 407 to Markham Road.

The Environmental Assessment Report documents the results of the studies that selected the technically preferred route and concluded with the decision to extend Highway 407 and a Transitway from Markham Road to Highway 7 east of Brock Road. The project location is shown on Exhibit 2.

B. PROBLEM AND OPPORTUNITIES

Chapter 2 of the EA Report provides a synopsis of the transportation analysis carried out for the project and documents the need for more transportation capacity.

Over the past three decades, numerous planning and transportation studies have been undertaken in west Durham and the eastern portions of Metropolitan Toronto and York Region. All of these studies recognized the transportation related constraints in and around the GTA and the need for additional east-west transportation capacity across the Metro-York/Durham Boundary. A number of these studies also recognized that a combination of roadway, transit and Transportation Demand Management (TDM) improvements is required to satisfy existing and future transportation demands.

For this EA, screenline analyses were carried out for three horizon years: 1998, 2011 and 2021. Exhibit 3 (a) displays the analysis for a scenario with Highway 407 extending to

Markham Road, while Exhibit 3 (b) shows the analysis of a scenario with Highway 407 extending to Brock Road/Highway 7 as a 4-lane "interim" freeway facility.

1998 Deficiencies

The traffic analysis demonstrates that when Highway 407 Central opens to Markham Road, the following conditions can be expected:

- Markham Road between Highway 7 and Highway 407 will be *extremely congested*;
- the Highway 7 corridor will have a capacity deficiency equivalent of 1-

CONTENTS

- A. BACKGROUND & HISTORY
- B. PROBLEM AND OPPORTUNITIES
- C. STUDY AREA
- D. ALTERNATIVES TO THE UNDERTAKING
- E. EXISTING CONDITIONS
- F. ROUTE PLANNING ALTERNATIVES
- G. RATIONALE FOR THE UNDERTAKING
- H. DESCRIPTION OF THE UNDERTAKING
- I. SUMMARY OF CONCERNS AND COMMITMENTS
- J. CONCLUSIONS

2 lanes of arterial capacity (one-way);

- traffic is expected to increase on: Highway 7 east of Markham Road; 14th Avenue; and Whitevale Road. This will result in increased traffic through the communities of Box Grove, Green River, Locust Hill, Whitevale, Brougham and Greenwood; and
- there will be deficiencies across the Metro-York/Durham boundary, even with the completion of the widening of Highway 401 to 12 lanes as far as Brock Road.

2011 Deficiencies

By 2011, there are expected to be *major* capacity deficiencies crossing the Metro-York/Durham boundary for both person and road demands. Transit ridership is estimated to increase by more than 50% in the peak hour across the boundary over 1998 volumes.

It also is expected that high density employment nodes will continue to be developed along the Highway 7/407 corridor through Markham and Vaughan, thereby creating opportunities for a major transit corridor to capture transit riders. The provision of transit in the Highway 7/407 corridor is essential to link Durham with York Region and north Metro through high quality transit connections and to achieve the transit capacity needed by 2011.

Even with Highway 407 as a four lane facility across the boundary (i.e. to Brock Road/Highway 7), there will be a total deficiency across the Metro-York/Durham boundary equivalent to 15 arterial lanes (one-way) across the entire screenline. In the Highway 7/407

corridor alone, there will be a capacity deficiency of 4 arterial lanes (one-way).

By 2011, there will be a deficiency east of Brock Road equivalent to a total of 10 arterial lanes (one-way) with or without the extension of Highway 407 to Brock Road.

2021 and Beyond

Studies show that both population and employment in the Region of Durham will more than double between 1998 and 2021¹.

Projections for the year 2021 show deficiencies at the Metro-York/Durham boundary in the Highway 401 and Highway 7/407 corridors of 15 and 7 arterial lanes respectively.

Beyond 2021, the GTA is expected to continue to be a major focus of industrial and business activity in Ontario. Therefore, while travel patterns may change and be mitigated by changes affected by demand, supply and growth management strategies, the *travel demands in both the Highway 401 and Highway 7 corridors are expected to continue to grow*.

Summary of Deficiencies

It is clear from the analysis carried out for this study and supported by past studies that there is a need for additional road and transit capacity within the Highway 7 corridor east of Markham Road. There are also limited opportunities for meeting this need through additional arterial capacity. It was on the basis of this need that the planning for the Highway 407 /Transitway was carried out.

1 Population and Employment Outlook for the Greater Toronto Area, Hemson and Coopers & Lybrand, August 1993

C. STUDY AREA

For the purposes of the system planning phase and transportation analysis, the study area included the Greater Toronto Area (GTA) and adjacent regions influencing the travel demands within the GTA.

When reviewing extension/staging options, a study area between Markham Road and Sideline 14 in the Town of Pickering was used (see Exhibit 4).

The study areas were determined taking into consideration existing and proposed land uses, environmental constraints, transportation network need and comments received during the consultation process.

D. ALTERNATIVES TO THE UNDERTAKING

Chapter 3 of the EA Report provides a description, assessment and evaluation of the planning alternatives which could be implemented to resolve the transportation/traffic problems presented in Chapter 2. The following alternatives were considered:

Do Nothing - This alternative assumes that Highway 407 will be completed and opened to Markham Road from the west, in 1998. It also assumes that there will be no improvements to increase vehicular and/or person trip capacity in and through the Durham Region in 1998, other than the ongoing widening of Highway 401 to Brock Road in Pickering. The study concluded that the do nothing alternative is not a practical solution to the problems being addressed in this study.

Improvements to Transit Service - This alternative includes possible improvements to GO Rail, heavy rail service, and local and inter-regional municipal transit. The study



HIGHWAY 407 / TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

STUDY AREA

EXHIBIT

concluded that transit improvements will not by themselves satisfy existing or future travel demands across the Metro-York/Durham boundary, or resolve anticipated traffic problems in the Markham Road area.

Improved Transportation System Management Measures (TSM) - This alternative involves measures to maximize existing infrastructure capacity such as improved signalization, addition of turning lanes at intersections, etc.

The analysis concluded that TSM measures could result in minor localized improvements on roadways within the Study Area. However, they will not adequately address the traffic problems in the Markham Road area. They will also not adequately address existing or future deficiencies in transportation system capacity across the Metro-York/Durham boundary.

Promotion of Transportation Demand Management (TDM) Improvements - This alternative includes such measures as telecommuting, trip sharing, developing High Occupancy Vehicle (HOV) systems, etc. The study concluded that TDM measures do not represent a practical solution to the defined short term problems in the Markham Road area and the deficiencies across the Metro-York/Durham boundary.

Upgrade Arterial/Municipal Roadways - This alternative involves expanding the existing municipal system to provide additional travel lanes and/or HOV or transit only lanes. However the analysis concluded that there is limited opportunity in both the short and long terms to affect the capacity concerns at Markham Road or increase the capacity across the Metro-York/Durham boundary

using existing or future arterial roads.

Growth Management - This alternative involves land use strategies to increase employment to population ratios thereby reducing the number of work trips across the Metro - York/Durham boundary. In the short and medium term time-frames (up to 20 years), there will be limited opportunities to affect significant changes in travel patterns through growth management. Therefore, this alternative has little potential for addressing the traffic problems and capacity deficiencies.

Extend Highway 407 Easterly - This alternative involves the extension of Highway 407 and a new transitway easterly from Markham Road. This alternative is the only planning alternative that will adequately satisfy existing and future transportation /traffic and social (community) issues.

Conclusion:

The analysis of the foregoing alternatives resulted in the decision that:

- Extending Highway 407 east of Markham Road as an "interim" 4-lane facility is a logical first priority in the package of improvements to resolve existing short term capacity deficiencies across the Metro-York/Durham boundary and traffic problems within communities in the Highway 7 corridor ("the problem"). This improvement, compared to the other planning alternatives, is the only one that satisfies both short and longer term mobility requirements.
- In recognition of the future anticipated travel demands a right-of-way for a basic 10-lane freeway facility will be protected for at this time.
- Also, in recognition of the future transit demands, as articulated in Chapter 2 of the EA Report, there is a defined need to protect for a higher

order transit facility or transitway which will parallel Highway 407.

The "key" reasons for the recommended planning alternative include:

- In the short term, it provides the maximum relief to the transportation problems related to the termination of Highway 407 at Markham Road. It also provides maximum relief to east-west capacity constraints across the Metro-York/Durham boundary.
- It represents a critical component in the future transportation networks for the Regions of Durham and York as previously identified in the Highway 407 Overview Study and the Regional Official Plans.
- It provides the opportunity to protect an appropriate right-of-way that allows for higher order transit service in the future.
- Improved transit services, TSM and TDM measures, upgrading of existing arterials and municipal roadways and community growth management within Durham, will not solve the short-term transportation problems.
- Even though the easterly extension of Highway 407 as a 4 lane facility will provide significant east-west capacity across the Metro-York/Durham boundary, it will not be able to satisfy all cross boundary traffic demands in year 2011 and beyond. The traffic analyses carried out for this Study have identified that an ultimate 10-lane extension of Highway 407 would best address the long-term capacity deficiencies within the study area.

Both the future 10-lane freeway and the transitway will form part of a balanced transportation plan for Durham, York and Metro and will serve to partially address future travel demand requirements in the Highway 7/407 corridor.

E. EXISTING CONDITIONS

Chapter 4 of the EA Report describes the existing conditions within the study area. The soils in the entire study area are classified as having Class 1-2 capability for agriculture. Although much of the area is in agricultural usage, the local Official Plans designate most of the land for non-agricultural uses. The exception is the Rouge-Duffins Agricultural Area between the Little Rouge and West Duffins Creeks.

Urban development is currently focused in the Town of Markham and in rural hamlets including Box Grove, Green River, Locust Hill, Whitevale and Brougham. Future urbanization is planned with major developments proposed in the Cornell and Seaton areas. Because of the proximity of the corridor to existing and proposed developments, noise and visual impacts were a consideration during route planning and assessment.

The major natural features in the study area are associated with the north-south oriented watercourses. Terrestrial and aquatic studies conducted for the EA show that the watercourses and valleys associated with the Rouge River, Little Rouge Creek, West Duffins Creek, Urfé Creek and a tributary of the West Duffins Creek and Brougham Creek provide the most significant fisheries and wildlife habitat.

These valley systems also provide valued corridor functions and therefore were a major consideration throughout the study. Many of these valley systems are within the proposed Rouge North Park, and the Whitevale Corridor ESA.

In addition to the valley systems, areas of upland vegetation were identified with certain significant

woodlots in the Town of Markham being avoided during route planning.

There are zones of high water table, groundwater recharge and upwelling that were important considerations in the identification and assessment of route alternatives.

The study area has numerous archaeological sites and several historical buildings. Therefore, impacts to heritage resources were considered during the assessment of alternatives.

The existing transportation network in the study area is comprised of a combination of federal, provincial and municipal roadways and transit systems. As discussed in Section B, dealing with problems and opportunities, this transportation system is currently experiencing considerable congestion and will be unable to handle the anticipated increase in travel demand.

There are no existing utilities nor geotechnical conditions within the study area that were considered to represent a major constraint during route identification or evaluation.

Based upon a thorough understanding of the study area, 26 factors and 88 associated indicators were identified and used in the evaluation of route alternatives. These indicators are described in Appendix 1 to the EA Report.

F. ROUTE PLANNING ALTERNATIVES

Chapter 5 of the EA describes the Route Planning phase of the study in detail. This phase of the study was completed in 1992. During this phase of the study, alternative route segments were identified using a constraints approach. In other words major constraint areas were avoided where possible. The route alternatives, and constraints affecting their selection

are shown in Exhibit 5. The various route segments were assessed with respect to their impact on 88 indicators under the following factor areas:

- Natural Environment
- Social Environment
- Cultural Environment
- Agriculture
- Economic Environment
- Transportation and Engineering

The assessment led to the identification of the Technically Preferred Route shown in Exhibit 2.

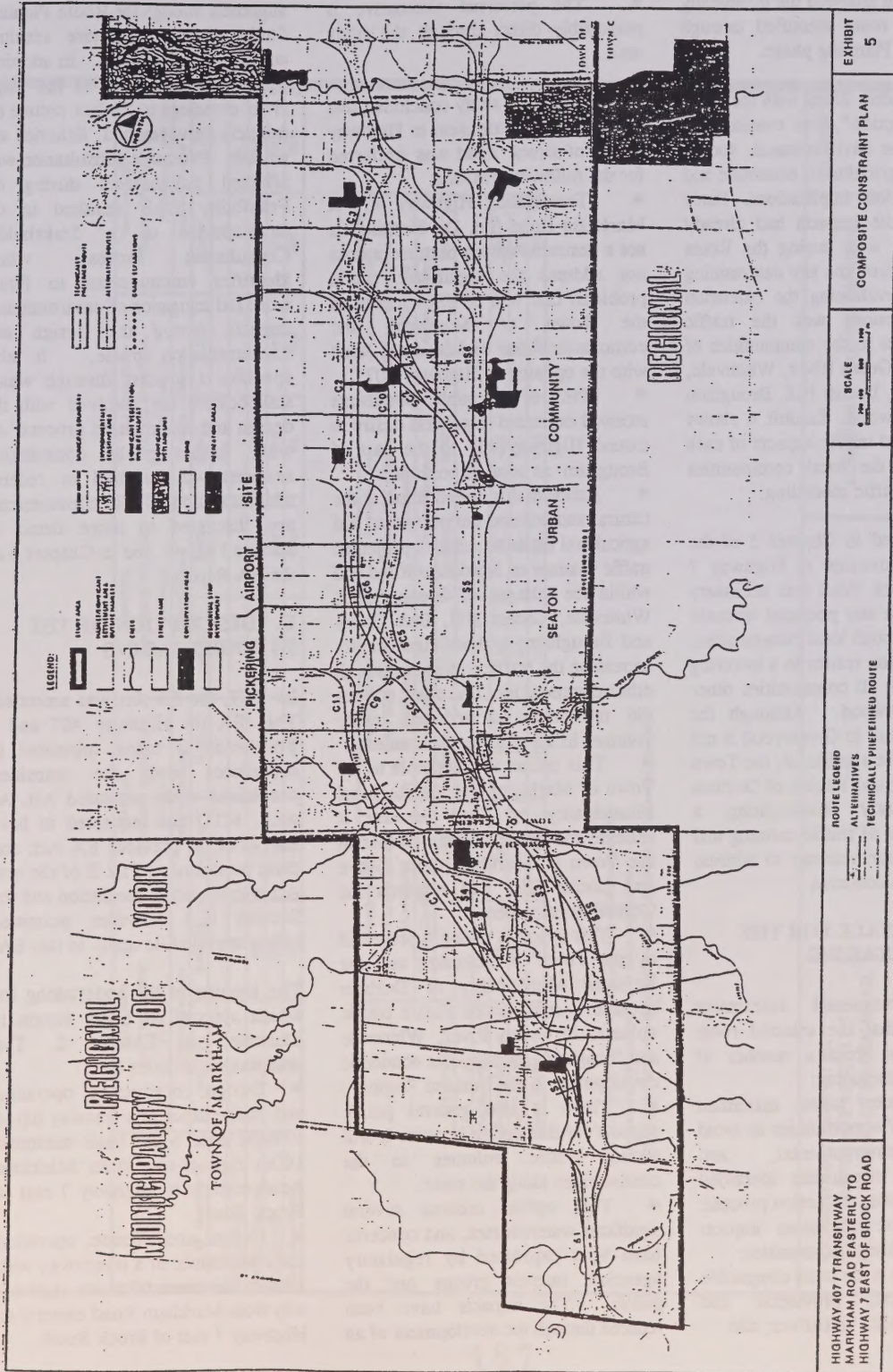
Throughout the identification, assessment and analysis of alternatives, external agencies, municipalities, special interest groups and the public were consulted. This consultation involved mailings, meetings, and Public Consultation Sessions. The consultation process is described in detail in Chapter 1 of the EA.

The Technically Preferred Route was presented to the stakeholders and comments were invited. In response to a request from special interest groups, an alternative location for crossing the Little Rouge Creek was investigated and eventually selected because it crossed at a less environmentally sensitive location.

Significant traffic increases are anticipated on the road network east of Markham Road with the opening of Highway 407 to Markham Road, and it has been determined that an extension of Highway 407 east of Markham Road is the best available solution.

Subsequently 3 extension staging options were identified and evaluated. These included extensions to:

- the proposed Markham Bypass;
- the Durham-York Line; and
- Highway 7 east of Brock Road.



Each option followed the technically preferred route identified through the Route Planning phase.

The 3 options, along with the "Do-nothing Option", were evaluated in light of the environmental, social, cultural, agricultural, economic and transportation implications. Since many of the impacts had already been dealt with during the Route Planning phase, the key determining factor in evaluating the extension staging options was the traffic implications in the communities of Markham, Green River, Whitevale, Box Grove, Locust Hill, Brougham and Greenwood. Exhibit 6 shows the projected traffic impacts of each option on the local communities based on traffic modelling.

As described in Chapter 5 of the EA, the extension to Highway 7 east of Brock Road was necessary to minimize any potential increase in traffic through local communities. This extension results in a lowering of traffic in all communities other than Greenwood. Although the traffic increase in Greenwood is not expected to be significant, the Town of Pickering and Region of Durham are currently investigating a combination of traffic calming and roadway improvements to address these traffic concerns.

G. RATIONALE FOR THE UNDERTAKING

The environmental assessment concluded that the selected route was optimal from a number of standpoints including:

- The route takes maximum advantage of opportunities to avoid social, environmental, and engineering constraints identified through the data collection process;
- The route minimizes impacts upon established communities;
- The route is the most compatible with federal, provincial and municipal policy initiatives; and

- The preferred alternative is reasonably direct through the study area.

Furthermore the study concluded that the immediate extension to Highway 7 east of Brock Road was preferred for the following reasons:

- Terminating Highway 407 at Markham Road (i.e. Do Nothing) is not a desirable option because it does not address the significant traffic problems that will be experienced in the Town of Markham and communities east of Markham Road with the opening of Highway 407;

- Many of the public comments received expressed a general desire to extend Highway 407 to the east of Brougham as soon as possible;

- Although this option impacts the natural and cultural environment, and agricultural lands, it reduces projected traffic volumes on Markham Road and within the villages of Green River, Whitevale, Locust Hill, Box Grove and Brougham, without significantly increasing the traffic volumes through other communities. The other options did not result in reduced traffic volumes in all of these communities.

- This option is acceptable to the Town of Markham and the Regional Municipality of York because it relieves the future traffic volumes in the Town of Markham, Box Grove and Locust Hill, and supports the Cornell development.

- This option is strongly preferred by the Town of Pickering and the Regional Municipality of Durham because it relieves the future traffic volumes in Green River, Whitevale and Brougham, and supports economic development in the Durham Region.

- There is also general public support for this option because it will reduce traffic volumes in the communities along the route.

- This option crosses several significant watercourses, and concerns have been expressed by regulatory agencies, interest groups and the public. The impacts have been reduced through the development of an

alignment through the Route Planning Study that avoids more sensitive environmental features. In addition, bridges are proposed at the major river crossings to further reduce the impacts on vegetation, fisheries and wildlife. Extensive consultation with affected stakeholders during the Feasibility Study resulted in the development of a Stakeholder Consultation Process, which identifies commitments to future work and mitigation of environmental impacts during the design and implementation phase. It also specifies a process through which stakeholders are involved with the design and construction process. As well, further public consultation sessions will be held to receive additional input. These commitments are discussed in more detail in Section I below, and in Chapter 6 or the EA Report.

H. DESCRIPTION OF THE UNDERTAKING

In 1997, the EA Act was amended. This EA for Highway 407 and a Transitway is being submitted in accordance with the transition provisions of the amended Act. As such, MTO has requested to have Part II of the previous EA Act; and those provisions of Part II of the new Act with respect to mediation and the Section 12.2 activities permitted before approval, to apply to this EA.

The location of the undertaking for which approval is being sought is illustrated in Exhibit 2. The undertaking includes the:

- Design, construction, operation and maintenance of a freeway (up to 10 basic lanes) with a basic minimum 100m right-of-way from Markham Road easterly to Highway 7 east of Brock Road;
- Design, construction, operation and maintenance of a transitway with a basic minimum 60 metre right-of-way from Markham Road easterly to Highway 7 east of Brock Road;

	Green River Hwy 7 East of RR30 Westbound		Whitewater Conc 5 East of Allona Westbound		Locust Hill Hwy 7 East of 10th Line Westbound		Box Grove East 14th Ave East of Ninth Westbound		Box Grove West 14th Ave West of Ninth Westbound	
	Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease	
	volume (1)	% diff. (2)	volume	% diff.	volume	% diff.	volume	% diff.	volume	% diff.
407 Terminus at										
Markham Road										
Markham By-Pass	85	10%	10	8%	100	15%	40	10%	-100	-10%
York Road 30	125	15%	10	8%	-480	-40%	-170	-35%	-110	-15%
Brock Road/Hwy 7	-40	-5%	-15	-5%	-365	-45%	-45	-10%	-160	-20%

	Brougham East Hwy 7 East of Brock Westbound		Brougham West Hwy 7 West of Brock Westbound		Greenwood East 8th Conc. East of Westway Westbound		Greenwood West 6th Conc. West of Westway Westbound	
	Increase/Decrease		Increase/Decrease		Increase/Decrease		Increase/Decrease	
	volume	% diff.	volume	% diff.	volume	% diff.	volume	% diff.
407 Terminus at								
Markham Road								
Markham By-Pass	35	6%	40	5%	-30	-35%	26	25%
York Road 30	70	10%	70	15%	16	20%	20	20%
Brock Road/Hwy 7	-280	-45%	-185	-35%	165	220%	220	220%

Note:

Base Condition - Based on 1998 a.m. peak hour volume projections

(1) - Based on 1998 a.m. peak hour volume projections

(2) - % Increase/decrease in traffic between Base Condition and extension alternative

HIGHWAY 407 / TRANSITWAY
MARKHAM ROAD EASTERLY TO
HIGHWAY 7 EAST OF BROCK ROAD

COMMUNITY TRAFFIC IMPACTS

EXHIBIT

6

- Design, construction, operation and maintenance of full interchanges at Markham Road, the 9th Line, Markham Bypass, the Durham-York Line (Regional Road 30), and Brock Road;

- Design, construction, operation and maintenance of two interchanges between the Durham-York Line and Brock Road at specific locations to be determined at a later date as part of the Seaton planning process (See Chapter 4 of the EA Report for a description of the Seaton development proposal);

- Design, construction, operation and maintenance of a realignment of Highway 7 and 11th Line at the Durham-York Line to allow for the Highway 407 interchange;

- Design, construction, operation and maintenance of a connection to Highway 7, east of Brougham permitting access to and from both the east and the west;

- Design, construction, operation and maintenance of grade separations at 10th Line in Markham, and North Road, Sideline 24 and Sideline 16 in Pickering, and the CPR Havelock Subdivision west of the Little Rouge Creek;

- Closure of all north-south roads crossed by Highway 407/transitway where interchanges or grade separations have not been indicated; and

- Acquisition of property for, and construction of the ultimate Highway 407/Transitway and associated features, which may include but are not limited to: stormwater management facilities; temporary construction easements; access roads; and mitigation/compensation measures.

Approval of the undertaking by the Minister of Environment and Energy will allow the Ministry of Transportation (MTO) or its agent to:

- refine the alignment and property requirements for the

undertaking during the design phase;

- file a designation plan for the undertaking;

- acquire property necessary for implementation of the undertaking; and

- design, construct, operate and maintain the completed highway and transitway, and the associated features.

Implementation of the undertaking will take place over a number of years and reflect financial conditions and traffic/transit demands. It is likely that the implementation of the project will be staged. This staging may include:

- Phasing of the ultimate basic 10 lane highway cross section to respond to traffic demands. Initial construction could consist of 2 basic lanes per direction, plus auxiliary lanes where required. The additional lanes would be added as traffic demands grow and downstream roadway capacity to handle the added traffic is in place.

- Opening of the highway to traffic as sections become available for use.

- Staging of some interchanges and grade separations with at grade intersections initially.

- Staging of interchange ramps to provide for moves restricted to certain directions initially with others being added when traffic demands/network development warrant.

- Provision of an interim connection at Highway 7 east of Brock Road

- Construction of a Transitway in a separate corridor adjacent to Highway 407.

It is important to note that mitigating measures will be planned and designed on the basis of the ultimate facility. However, the implementation of mitigating measures may also be phased in accordance with the impacts associated with each phase of implementation.

Note: The approval being sought by this EA, and the commitments made in this EA, will apply to and be

binding upon the Ministry of Transportation, its agents, successors, transfers and/or assigns, and will be applicable to the design, construction, operation and maintenance of the undertaking.

I. SUMMARY OF CONCERNS AND COMMITMENTS

Throughout the planning of this undertaking, the Project Team sought to identify areas of environmental concern and to identify a route that was sensitive to these concerns. With a project of this nature, it is not possible to avoid all environmental impacts. Therefore, it will be important that during the design phase, measures are developed to further reduce unavoidable impacts. A key component of this effort to reduce environmental impacts is the *Stakeholder Consultation Process* that was developed with extensive input by the stakeholder agencies. It was also reviewed with the public and interest groups at the last round of public consultation sessions.

The design team will meet with the stakeholders on a regular basis during the design and construction phase. A schedule of meetings will be established at the outset of consultation to ensure that stakeholders can effectively schedule their participation. As well, all meetings will be documented.

To keep the public informed through the design phase and to allow for public input, two public consultation sessions will be held during the design phase. In addition, public notification of the commencement of construction will be provided.

Specific commitments to environmental protection measures, ongoing consultation and follow-up monitoring will be documented in "Design and Construction Reports" and made available to the

stakeholders for review and comment prior to the commencement of construction.

During the consultation phase of this study, numerous specific commitments were made to ensure that environmental and cultural resources are protected. These commitments are detailed in Chapter 6 of the EA Report and summarized in Table 6.6.1 - A Summary of Concerns/Potential Effects/ Proposed Mitigating Measures and Commitments to Further Work.

Table 6.6.1 documents the specific environmental concerns, who raised the concern, what the potential effect could be, and how these effects will be addressed. It should be read in conjunction with the 1:10,000 Plates illustrating the undertaking - also provided in Chapter 6. The commitments that apply to the entire route are attached to this summary.

J. CONCLUSION

Traffic studies demonstrate that there will be serious traffic problems on the area road network east of Markham Road and in communities to the east when Highway 407 opens at Markham Road without an easterly extension of Highway 407. Furthermore, studies show that there is a significant shortfall in east-west transportation capacity in the Highway 7 corridor and across the Durham-York boundary.

An extension of Highway 407 and a Transitway is needed to address these immediate and longer-term transportation problems.

The analysis shows that this extension must go as far east as Highway 7 east of Brock Road to minimize traffic impacts on the local communities.

The proposed route has been selected from a number of alternatives, giving consideration to a broad range of environmental, social, cultural, economic and transportation concerns. As well, the affected government agencies, municipalities, interest groups and public have been involved throughout the study. This involvement has resulted in ongoing refinements to the project.

The Stakeholder Consultation Process to be implemented as part of the design and construction phase is unique and will ensure that stakeholders have the opportunity to work with the design team to address site specific environmental concerns. This will ensure that the project is implemented in a way that is sensitive to the environment, and public and agency concerns.

TABLE 6.6.1

SUMMARY OF CONCERNS/POTENTIAL EFFECTS/PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Location	Environmental Issues/ Concerns	Concerned Group/Agency	Potential Environmental Effects of the Undertaking	Proposed Mitigating Measures, Commitments to Further Work	Comments
Entire Route	Upstream flood levels and downstream erosion at watercrossing.	MNR, MTRC, MOEE, RPA, Municipality, Public	Restriction of the valley could cause increased flood levels upstream, and increased water velocity resulting in downstream erosion.	A drainage analysis will be carried out to ensure that crossings are designed to minimize erosion and flood risk.	See Section 6.4.1
	Runoff impacts on watercourses	MNR, MOEE, MTRC, RPA, Municipality, DFO, DOE, Interest Groups, Public	Stormwater runoff can adversely affect water quality, fish habitat and stream erosion.	Stormwater management plan will be developed. Erosion control plan will be developed.	See Section 6.4.1
	Archaeological sites	MCzCR, LACAC, Municipality	Loss of archaeological resources.	Pre-construction archaeological surveys and mitigation will be done in consultation with Heritage agencies.	See Section 6.4.3
	Fish habitat	MNR, MTRC, RPA, DFO, DOE, Interest Groups, Public	Harmful alteration of fish habitat.	Stream assessment and crossing design in accordance with SCP. Compensation plans in accordance with Fisheries Act.	See Sections 6.3.2 & 6.4.1
	Groundwater upwelling areas	MNR, MOEE, MTRC, DFO, DOE	Culverts can interfere with upwelling areas adversely affecting baseflows to coldwater streams.	Open-bottomed culverts/bridges will be considered in upwelling areas.	See Section 6.4.1

Location	Environmental Issues/ Concerns	Concerned Group/Agency	Potential Environmental Effects of the Undertaking	Proposed Mitigating Measures, Commitments to Further Work	Comments
Entire Route	Spills	MOEE, MNR, MTRC, RPA, DFO, DOE, Interest Groups, Public	Spills can cause adverse effects on surface and ground water and soils.	Ease of containment of spills at stormwater management facilities will be reviewed during design.	See Section 6.4.1
	Contaminated sites	MOEE	Unknown contaminated sites may be encountered during design or construction.	A Phase I assessment of property is currently underway. Sites will be managed in accordance with MOEE's decommissioning guidelines.	See Section 6.4.1
	Noise	MOEE, Municipality, Public	Increased noise	Detailed noise studies will be carried out during design phase and appropriate mitigating measures will be determined.	See Section 6.4.2
	Agricultural land	OMAFRA, Public	Loss of prime agricultural land.	Impact reduced through planning. Opportunities for further reduction will be considered during design	See Section 6.4.4
	Impacts on wells/septic systems	MOEE, Municipality, Public	Reduction in supply. Impacts on quality and quantity of groundwater. Possible pathway to aquifers if not properly abandoned.	Contractor will be responsible for correcting impacts resulting from construction. Wells and septic systems removed from service will be properly abandoned/ decommissioned.	See Section 6.4.1
	Impacts on groundwater recharge areas.	MOEE, MNR, MTRC, Municipality, DFO, DOE	Roadway runoff and spills can adversely affect groundwater quality.	Stormwater management plans will be developed to minimize the effects of stormwater. (See spills.)	See Section 6.4.1

SUMMARY OF CONCERNS/POTENTIAL ENVIRONMENTAL EFFECTS/ PROPOSED MITIGATING MEASURES AND COMMITMENTS TO FURTHER WORK

Table 6.6.1 in the EA report provides a summary of: environmental issues/concerns; the concerned external interests that identified the issues; the potential environmental effects of the undertaking; the proposed mitigating measure; the commitments to future work; and where in the EA Report further discussion of the mitigating measure can be found.

Steps taken during the design stage of the project to address and finalize environmental commitments will be documented in "Design and Construction" reports which will be available to stakeholder agencies for information and monitoring purposes prior to construction.

The following summarizes the commitments that apply to the entire undertaking. The reader should refer to the complete Table in Chapter 6 of the EA, for the site specific commitments.

In Table 6.6.1, the following shortforms apply:

MNR	- Ministry of Natural Resources	DFO	- Department of Fisheries and Oceans
MOEE	- Ministry of Environment and Energy	DOE	- Environment Canada
MTRC	- Metro Toronto Region Conservation	MCzCR	- Ministry of Citizenship, Culture and Communications
RPA	- Rouge Park Alliance	LACAC	-Local Architectural Conservation Advisory Committee
SCP	- Stakeholder Consultation Process		

NOTE: Reference in this Table to the impacts of culverts is intended to make the reader aware of the potential for the use of culverts at some crossings. However, as stated throughout this EA, the actual type of crossing to be employed will not be determined until the design stage, and will be done in consultation with the affected stakeholders.

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

250 Davisville Avenue
Toronto ON M4S 1H2

250, avenue Davisville
Toronto ON M4S 1H2

CLERK'S DEPARTMENT

April 16, 1997

TO: Municipal Clerks
Distribution list #2

Dear Sir/Madam:

RE: HIGHWAY 407/TRANSITWAY (MARKHAM ROAD EASTERLY
TO HIGHWAY 7 EAST OF BROCK ROAD) ENVIRONMENTAL
ASSESSMENT
EA FILE NO. TC-CE-02

Original To:	<i>WJ</i>	(416) 440-3483
Copy To:		
C.C.	File	
Take Appr. Action		

Enclosed are two copies of the above-noted Environmental Assessment (EA) submitted to the Minister of Environment and Energy for approval under the *Environmental Assessment Act*. Please complete and return the "Acknowledgement of Receipt" form as soon as possible.

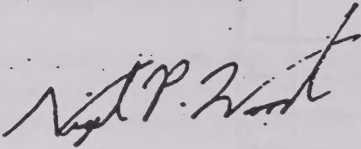
One copy of the EA is intended for your internal use. Please make the other available for public inspection. The public will be advised of this opportunity through a notice in the newspaper. The Ministry of Transportation will confirm the publication date and send you a copy of the notice.

The Ministry of Environment and Energy will co-ordinate a Review of the EA, based on comments from ministries, government agencies, municipalities and the interested public. The deadline for comments is June 6, 1997. All comments will be noted in the Review and kept on the public record file at the Environmental Assessment Branch.

The ministry will issue a public notice once the Review is completed. Please retain the EA documents after June 6, 1997, for this second inspection period. Please ensure that the public has access to the Environmental Assessment, the Review and the ministry's public notice, once you have received them.

If you have any questions regarding this environmental assessment or the review procedure, please contact me at the above number.

Yours sincerely,



Nigel Wood
Review Coordinator
Environmental Assessment Branch

Enclosure

cc: Paul Jankowski
Project Director, Highway 407 East
Ministry of Transportation

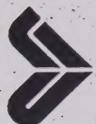
EA File No. TC-CE-02

NW/pm
WP162\0172I-#2



COMMENT SUMMARY FORM

EA Title:	Highway 407/Transitway (Markham Road Easterly to Highway 7 East of Brock Road)
Proponent:	Ontario Ministry of Transportation
Submitted	April 16, 1997
Comments Due:	June 6, 1997
Agency:	
Reviewer Name and Title	
☐ No Concerns ☐ Concerns	
Summary Statement (highlight issues/comments)	
- AUTHORITY & ROUGE PARK ALLIANCE AGREE WITH SELECTED ALIGNMENT. - LACK OF DETAIL RELATED TO TYPE OF TRANSITWAY, LOCATION OR FACILITIES. SCP NEEDS TO RECOGNISE NEED FOR DETAILED DESIGN OF THIS FEATURE WHICH WAS OVERLOOKED ON 407 WEST. - ONGOING PLANNING ISSUES (G ROUGE PARK NORTH & AG. LANDS) NEED TO BE RECOGNIZED IN SCP. AS WELL.	



the metropolitan toronto and region conservation authority

5 shoreham drive, downsvlew, ontario. m3n 1s4 (416) 661-6600 FAX 661-6898 <http://www.mtrca.on.ca>

June 5, 1997.

Mr. Nigel Wood
Senior Review Coordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5 th Floor
Toronto, Ontario
M4S 1H4

Environmental Assessment Branch	
RECEIVED	
JUN 12 1997	
To _____	Ea. File # _____
Public Record ☐	Full Text ☐

Dear Sir:

**Re: Environmental Assessment Report - Highway 407 / Transitway, Markham Road
Easterly to Highway 7 East of Brock Road, EA File No. TC-CE-02**

The Metropolitan Toronto and Region Conservation Authority has completed its review of the Environmental Assessment Report for the Highway 407/Transitway extension from Markham Road to Highway # 7 east of Brock Road. The Authority has met with, and is incorporating comments from, the Rouge Park Alliance as well.

The Authority and Rouge Park Alliance comments have been arranged into two categories. Firstly, general comments related to the EA document contents as defined within the review guidelines and secondly, specific comments related to sections of the document.

General Comments

In general, the document seems relatively complete in relation to the Highway facility in terms of alternative alignments identified and investigated. The Authority and Rouge Park Alliance have no objections to the alignment being put forward as preferred. We feel, however, that the document falls somewhat short in terms of analysis related to the transitway. The transitway is simply discussed in terms of it being within the 160 m right of way, likely along the southern boundary. The Stakeholders Consultation Process should be expanded to include issues related to both design and environmental mitigation measures related to both the roadway and transitway components.

Two ongoing planning initiatives should also be recognized within the document and some commitment undertaken to take them into consideration during the design stage. The first is the Rouge Park North Plan which may have specific implications related to the design of all crossings within the Rouge Watershed. The second planning issue relates to the proposed land use study of the Provincial Agricultural Preserve Lands. Should the study by the Town of Pickering result in a land use change, there may be implications to the highway/transitway design.

In addition to the Planning initiatives underway, the document does not appear to adequately define ancillary works related to the Highway/Transitway such as modifications to Highway # 7 or any North/South Connectors. Once constructed, the environmental impacts related to these works will have route selection and mitigation options constrained by the highway.

The technique identified to deal with defining and mitigating environmental impacts within the document will be also through the Stakeholders Consultation Process(SCP). The Authority and the Rouge Park Alliance have had input into this process through previous meetings with the Ministry of Transportation and again through the pre-submission of the EA. As such, we support the process and, for the most part, the details outlined within the document. Small issues related to some points of clarification will be identified in our specific comments.

The SCP is also designed to allow input into the design, construction and monitoring components of the Highway/Transitway project. There is no current timeframe defined for construction of the Transitway. The proposals and commitments within the process for monitoring are acceptable; however, the SCP could be amended to include a commitment for full time site monitoring at specific sites as defined through the SCP. In addition, some form of commitment to an action plan based on monitoring should also be investigated and included.

While the Authority and the Rouge Park Alliance have been identified within the EA as members of the SCP, this being a provincial project will not require permits under our legislation similar to what occurred on the 407 West component. We feel that the SCP will provide the mechanism to fulfill the requirements and address any concerns of the Authority and the Rouge Park Alliance.

Specific Comments

The following represents specific comments related to the text of the document:

In section 1.3.1 of the document, it is stated that the "Design and Construction" reports will be forwarded to the appropriate agencies for information and monitoring purposes. In section 6.3.4, the report states that the construction plans will be made available for review and comment. The aspect of being able to make comment on both the design and construction components of the project is important to both the Authority and the Rouge Park Alliance. This discrepancy within the document needs to be resolved.

In section 2.2.1.2, the report quotes the "Provincial Rouge Park Management Plan Policy" related to no new crossings south of Steeles Avenue being constructed. In section 2.4, the report states that if the Rossland Road/Finch connection is not constructed in the future, there will be additional demands placed on Highway 407. The apparent conflict of these two statements needs to be addressed and any implications defined.

In section 4.2.2, the sensitivity of groundwater recharge to the baseflow of receiving streams within The study area is flagged; however, no reference is made to potential mitigation of losses due to the roadway/transitway. The SCP should clearly identify that the stormwater treatment for the Highway/Transitway key on infiltration techniques to mitigate these issues.

Within section 4.5.1, the title for the Rouge Park should have the word "Valley" removed.

In section 5.5.3, under the "Natural Environment" component, the statement that staging of construction has no environmental impact is misleading. The timing of construction may have significant impacts related to fisheries and wildlife. Timing issues related to migration and spawning of fisheries will be a constraint to construction.

In section 6.2.7, the last bullet point defines construction of the transitway in a separate corridor adjacent to Highway 407. This statement is somewhat confusing given that the document is set up to define a single undertaking including the transitway. As noted earlier, the Authority believes that the design of this facility should be undertaken in combination with the highway design to address both technical, environmental and economic issues.

In section 6.4.1, under "Watercourse Crossings", the paragraph should reflect that bridges will be considered for other crossings aside from those flagged within the document based upon all environmental, social and economic aspects, not only the aquatic and terrestrial impacts.

Within the same section, the reference to avoiding the placement of piers within the watercourse channel under bankfull conditions is confusing in terms of the interpretation of bankfull. Reference should be made to the Authority's Valley and Stream Corridor Management guidelines, section 4.3 which relate to this issue.

Within the same section, the reference to where feasible, closed bottom culverts will not be used in up welling areas should be addressed. A similar statement occurs within table 6.6.1 related to up welling areas. Given the sensitivity of ground water in relation to the fisheries issues within these watercourses, open bottom culverts should be required at any crossing where groundwater up welling is occurring. Given this, these references should be corrected within the document.

Within the same section, under the "Wildlife and Corridors" heading, the use of the term "Corridors" in relation to the negative impacts of the highway should be replaced with "Transportation Corridors" to avoid any confusion with wildlife passage. The Authority and, in fact, the SCP should be reference and not just MNR in relation to sizing of crossings related to wildlife corridor issues.

Under section 6.4.2, Social Environment, Recreation, the Rouge Park North access issues and future trails should also be noted.

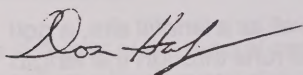
In table 6.6.1, the Whitevale Corridor E.S.A. has not been mentioned. This E.S.A. has recently been updated and adopted by the Authority. This should be included as an environmental constraint to be dealt with through the SCP. A copy of the updated information is attached.

Also in Table 6.6.1, there is mention of SWM and sediment control plans for the major valley crossings only. Similar plans will be necessary for all valley and stream crossings.

In table 6.6.1, it is the Authority and the Rouge Park Alliance's position that the well defined valley crossings such as at the Rouge, Little Rouge and West Duffin, with respect to the intent of the design should be to span the valley feature, not just the watercourse. As such, the reference to bridges being used to cross the watercourses under the proposed mitigation column may be interpreted as a given design conclusion. This should be altered to recognize the overall valley crossing will be determined through the SCP. The use of the term "may be placed in a culvert" related to the non identified bridge crossing locations also could be interpreted to reflect some pre-defined design commitment. This should also be altered to reflect the development of the applicable crossing size and type through the SCP.

In conclusion, the Metropolitan Toronto and Region Conservation Authority and the Rouge Park Alliance support the alignment selected for the Highway. We feel that our concerns related to the wording within the document can be resolved through refinements to the SCP.

Yours truly,



Donald R. Haley, P.Eng.
Project Engineer
Resource Science Section
Watershed Management Division

DH/L

Encl.

cc: Brian Denney
Dave Dyce
Dave Ross (MNR)
Dena Lewis
Bernie McIntyre
Mary Asselstine
Gemma Connolly
Gord Weeden (Rouge Park)

WHITEVALE CORRIDOR

Status: Updated ESA (98)
Date: 12/96
Criteria Fulfilled: 3, 5, 6, 7, 8

GENERAL DESCRIPTION

The Whitevale Corridor lies within the valley of the West Duffins Creek, from north of Finch Avenue west of Brock Road, to Highway 7, all in the Town of Pickering. Three physiographic regions are represented, the till plain, the Iroquois shoreline, and a sand plain to the south.

Within the Whitevale Corridor, the West Duffins Creek valley walls are high and there are a number of eroding cliffs and the valley floor wide. Though linear, the corridor is large and supports a diversity of natural communities. These include young to mature, coniferous and deciduous, lowland to upland forest, interspersed with marshes and meadows. Clear, unsilted water runs through the wide riverbed and deposits sediment bars which vary in particle size from sand to large cobble.

In 1996, the surrounding land use was mainly agricultural and old field, as well as a landfill site, a golf course and some concentrated residential areas. The Seaton Hiking Trail runs through the length of the ESA. Informal trails have had an impact on tree roots and herbaceous vegetation, but the relatively small numbers of people using the trails currently accounts for the limited amount of disturbance. The Whitevale corridor is just upstream from the Major Spinks ESA 97 and is connected to the Seaton Node ESA 140 via the forests along the Iroquois shoreline.

BOUNDARY UPDATE

Two areas were added to the ESA from the 1982 boundary. The first is located along a tributary east of the Whitevale Golf Course, east of the West Duffins. It contains a wide tract of mature, upland and lowland, deciduous and coniferous forest. The second extension is found on tableland, west of the Duffins Creek, near the Cherrywood Transformer Station. It is mainly cedar swamp, with some deciduous swamp, emergent marsh and upland forest.

CRITERIA FULFILLED

Criterion 3

The ESA provides 8 kilometers of opportunities for north-south movement for migratory and dispersing fauna. It connects numerous nodes of similar habitats, giving more chances for re-population of flora and fauna. This is likely the best linked, aquatic and terrestrial system south of the Oak Ridges Moraine, within the MTRCA Region.

Criterion 5

Slender gerardia (*Agalinis tenuifolia*) is considered rare in the MTRCA Region and in the Central Region of the Ministry of Natural Resources.

Criterion 6

The natural communities, which are mainly forests, are diverse in structure and composition. This is a result of the varying gradients and aspects, past land uses and ecological succession, and the length of the corridor.

The forests vary in age from young thickets to mature forests. Most of the coniferous forests are composed of eastern white cedar (Thuja occidentalis) and are found from the floodplain to the tableland. Eastern hemlock (Tsuga canadensis) is also found throughout. Many of the upland forests are composed of sugar maple (Acer saccharum), white ash (Fraxinus americana), american beech (Fagus grandifolia) and, in some cases, red oak (Quercus rubrum). Early successional forests are composed of trembling aspen (Populus tremuloides). Lowland deciduous forests are dominated by american elm (Ulmus americana), green ash (Fraxinus pennsylvanica) and willow species (Salix spp.). One large cattail (Typha spp.) marsh is found midway in the ESA and there are several other small pockets of lowland and upland meadows, and a deciduous or coniferous swamp.

The hemlock forests show signs of regeneration, an indication of the forests maturity and low levels of disturbance.

The diversity of the natural communities produces the ideal habitat for a variety of fauna species. The communities support sharp-shinned hawk (Accipiter striatus), ruffed grouse (Bonasa umbellus), wood thrush (Hylocichla mustelina) and northern waterthrush (Seiurus noveboracensis). These species indicate low levels of human disturbance. The red-breasted nuthatch (Sitta canadensis) requires coniferous forest interior for breeding. Northern waterthrush and swamp sparrow (Melospiza georgiana) are wetland- dependent breeders.

The West Duffins provides coldwater habitat for mottled sculpin (Cottus bairdii), a species which is indicative of high water quality because it needs cool, clear water. These conditions are dependent on good riparian habitat and on low disturbance in the adjacent parts of the reach. Other species which are found on the site, such as rainbow darter (Etheostoma caeruleum) are not common south of Highway 7 in the urbanized portions of the MTRCA Region. They are relatively sensitive species which indicate low disturbance of the riparian system. Localized rainbow trout (Salvelinus gairdnerii) spawning areas are found throughout. This species is not native to Ontario but is indicative of high quality cold water, which it needs for spawning.

Criterion 7

The Whitevale Corridor contains a large marsh. Wetlands associated with upland forests are of limited representation in the MTRCA Region. The largest wetland in the Whitevale Corridor is classified as a regionally significant wetland by the Ontario Ministry of Natural Resources.

Criterion 8

Sharp-shinned hawk, wood thrush, ruffed grouse and northern waterthrush are area-sensitive species which breed on the site.

COMMENTS

An old field south of Taunton Road and east side of Duffins Creek supports clay-coloured sparrow

(Spizella pallida). This sparrow is loosely colonial and three territories were found together, and in association with other meadow species such as bobolink (Dolichonyx oryzivorus), eastern meadowlark (Sturnella magna) and savannah sparrow (Passercuius sandwichensis). The clay-coloured sparrow is native to Ontario but is at the eastern edge of its range and is rare in the MTRCA Region. It nests in meadows in young coniferous trees, a habitat which is somewhat common but ephemeral. The old field in question is not included in the ESA but it will continue to provide habitat for this colony until the cedar saplings become too mature in a few years.

Uncommon species in the MTRCA Region found include; weasel (Mustella sp.), rufous-sided towhee (Pipilo erythrophthalmus) and vesper sparrow (Pooecetes gramineus). Species which are declining in their eastern distribution include gray catbird (Dumetella carolinensis) and rose-breasted grosbeak (Pheucticus ludovicianus).

Environmentally Significant Area #98

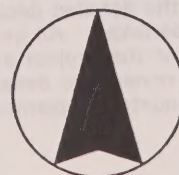
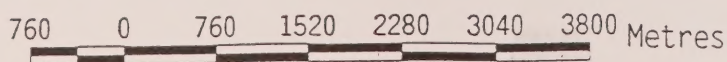


Town of Pickering



E.S.A. #98 - Whitevale Corridor

scale:



1996



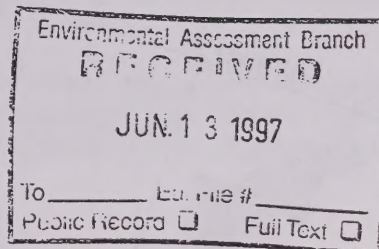
Environment Canada Environnement Canada

Environmental Policy, Planning, Assessment & Citizenship Division
Great Lakes & Corporate Affairs Office
Environment Canada, Ontario Region
P.O. Box 5050, 867 Lakeshore Rd.
Burlington, Ontario L7R 4A6

File No.: B-95-98

04 June 1997

Nigel Wood
Senior Review Coordinator
Environmental Assessment Branch
Ministry of Environment & Energy
250 Davisville Ave.
Toronto, Ontario
M4S 1H2



Dear Mr. Wood,

**Re: Highway 407/Transitway (Markham Rd. Easterly to Highway 7 East of Brock Rd.,
EA File No. TC-CE-02**

Thank you for providing Environment Canada the opportunity to comment on the provincial environmental assessment report for the above mentioned portion of the Highway 407 proposal by the Ministry of Transportation (MTO), as part of the government agency review. The following comments are provided on behalf of Environment Canada -Ontario Region's (DOE-OR) Environmental Assessment Coordinating Committee (EACC). As you know, components of this proposal will also be subject to the *Canadian Environmental Assessment Act* (CEAA), and as such our comments are provided in context of specialist knowledge and information under our role as a federal authority per section 12(3) of CEAA, to assist the responsible authorities in meeting their screening requirements under CEAA.

We have reviewed the Environmental Assessment Report for this proposal (February 1997) with respect to our department's mandates under section 36(3) of the *Fisheries Act* as it relates to the potential deposition of deleterious substances into waters frequented by fish, and under the *Migratory Birds Convention Act* with respect to the protection of migratory birds and their habitat.

Summary

We had previously reviewed the draft Environmental Assessment Report for this proposal (dated December 1996) and provided review comments to the MTO on 3 January 1997. We are satisfied that the final EA Report substantially addresses most of our previous comments, with a few exceptions as described below.

Water Quality

The wording used by the MTO in the final report is still not very specific in regards to certainty of application of some of the 'commitments' to protect water quality (i.e. use of wording such as "strive to", "where feasible", "reasonably can be achieved", etc.) - despite prior comments from DOE, DFO and the MOEE on this. However, involvement by appropriate government agencies during the detailed design and construction phases would help to ensure that the proper measures are undertaken. As indicated before, we expect to have the opportunity to comment on specific details of the project at the preliminary and detail design stages. At that time we will carry out further reviews to determine if the environmental mitigation commitments presented in this report are adequately implemented.



Migratory Birds and Wildlife Habitat

We noted in our previous comments that "Native species of trees, shrubs, grasses and forbs should be used to the maximum extent possible in site rehabilitation (i.e. All wetland plants used should be native species, but the use of native grasses, and forbs may be restricted to areas of low erosion potential)". The proponent states that "When developing planting programs the use of native species will be 'considered' " (Append. 24, p. 18). It is further stated that " 'Where possible', (the proponent will) develop planting programs in consultation with MNR, MTRC(A), RPA and DOE to encourage habitat/corridor functions at watercourse crossings. Use native species 'where practical'." (p. 6-34, para. 1). In order to minimize negative effects on migratory bird habitat, we expect a firm commitment by the proponent to use native species to the maximum extent possible. In addition to planting native trees and shrubs, we recommend the planting of several small (approximately 1/16 ha) demonstration plots (25 m x 25 m) of native grasses and forbs in areas of low erosion potential. This approach of planting small 'nodes' of native grass and forb species is currently being undertaken on the Hwy. 407 R.O.W. at Sixteen Mile Creek and Fletchers Creek, by the proponent. At both of these sites, a total of six 1/16 ha plots of native wetland, wet meadow, and upland grasses and forbs will be planted, and monitored for a three year period.

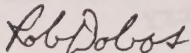
We also noted in our previous comments that "All topsoil disturbed on the R.O.W. should be used for 407 corridor rehabilitation". The proponent states that "Topsoil is a resource that will be used on the Hwy. 407 project to 'the extent possible'." (Append. 24, p. 18). It is important that the topsoil remains on site. Proper management of topsoil will preserve the seed bank, and provide adequate nutrients for the native species used in rehabilitation.

In our previous comments we mentioned that "In order to ensure maximum viability of the seed bank, the height of the topsoil storage piles should not exceed 1 metre.". The proponent notes that "It may not be possible to avoid stockpiling topsoil higher than 1 metre." (Append. 24, p. 18). If there is insufficient area available at the site to store all of the topsoil at a maximum depth of 1 m, we suggest that the top 10 cm of the soil profile be 'skimmed off' and treated in this manner, as this layer contains the bulk of the seed bank.

As has been suggested in the EA report, we wish to be involved in the development of planting programs to encourage habitat/corridor functions at watercourse crossings (p. 6-34, para. 1). We also wish to review the rehabilitation plan at a later stage, to ensure that practical wildlife habitat enhancements have been incorporated to the greatest extent possible.

If you wish to discuss any of these comments, do not hesitate to contact me at (905) 336-4953.

Yours sincerely,



Rob Dobos
Secretariat, Environmental Assessment Coordinating Committee
Environment Canada -Ontario Region

cc: B.Bien, EACC
M.Shaw, GLCAO
J.Fischer, ECB
A.Robertson, CCG
W.Hyatt, DFO
P.Lacoste, NTA
K.Grady, CEEA
P.Jankowski, MTO
D.Ross, MNR

Ministry of
Agriculture
and Food

Ministère de
l'Agriculture et
de l'Alimentation

Environmental Assessment Branch	
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To _____	Ed. File # _____
R.R.# _____	Public Record ☐ Full Text ☐

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Agriculture & Rural Division

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April 24, 1997

Nigel Wood
Senior Review Co-ordinator
Environmental Assessment Branch
Ministry of the Environment
250 Davisville Avenue
Toronto, Ontario
M4S 1H2

Dear Sir:

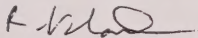
RE: Highway 407/Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)
York Region
EA File Number: TC-CE-02

Staff of this Ministry have completed a review of the above-noted report. Consideration has been given to the matter in terms of the goals, objectives, programs and policies of this Ministry.

This Ministry is satisfied with the data, analysis and conclusion, the method of implementation and the monitoring and contingency plans that have been outlined within the EA report.

Should you have any questions or wish to discuss this matter further, please contact this office.

Yours truly,


Ray Valaitis
Rural Planner

copy: Donna Sharp Mundie, Environmental Policy Adviser, OMAFRA

(EA3a.rcv)

DAVID J. CROME
Manager Strategic Planning Branch
Planning and Development

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Environmental Assessment Bra

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APR 16 1997

To Mike Ea. File # _____
Public Record ☐ Full Text

ENT SUMMARY FORM

EA Title:	Highway 407/Transitway (Markham Road Easterly to Highway 7 East of Brock Road)
Proponent:	Ontario Ministry of Transportation
Submitted	April 16, 1997
Comments Due:	June 6, 1997
Agency:	MUNICIPALITY OF CLARINGTON
Reviewer Name and Title	DAVID J. CROME MANAGER, COMMUNITY PLANNING BRANCH, CLARINGTON
☒ No Concerns	☐ Concerns

Summary Statement (highlight issues/comments)



Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

COMMENT SUMMARY FORM

EA Title:	Highway 407/Transitway (Markham Road Easterly to Highway 7 East of Brock Road)
Proponent:	Ontario Ministry of Transportation
Submitted	April 16, 1997
Comments Due:	June 6, 1997
Agency:	CANADIAN CAST. ENVIRONMENT
Reviewer Name and Title	AL ROBERTSON. NWP. officer
☐ No Concerns ☐ Concerns	
Summary Statement (highlight issues/comments)	
approval of Bridge Section (511) of the NWP - requires CEAA review. we are a federal P.A. & will be co-ordinating the CEAA review w/ DFO. Further comments as they are received. A. ROBERTS - NWP. officer Prescott Area	

Summary of Public Comments by Subcategory	
Subcategory	Comments
Private or second home	Comments also focus on the impacts on the environment, especially the loss of farmland, the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407.
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Other	Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407. Comments also focus on the loss of the Highway 407 and the loss of the Highway 407.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Summary of Public Comments by Submission

Submission	Comments
Friends of Second Marsh Oshawa	• Concerned that there will be impacts on the watershed ecosystem which Second Marsh, a Provincially Significant Wetland and Area of Natural and Scientific Interest, is part of and critically dependent on. • Concerned for impacts that the Highway and a possible Freeway Link could have on increasing sediment levels in the watershed and the Marsh. • The Highway will bisect and segregate natural habitat areas, reducing the potential for corridor movement by fish, wildlife and plants. Of particular concern is the vegetated area bounded by Courtice Rd., Solina Rd., Nash Rd. And Concession 6 in the Municipality of Clarington. • Concerned that any alteration to the groundwater system within and surrounding Black/Farewell wetland complex, such as soil compaction, grading, paving and de-watering for highway construction could have a significant impact on natural base flows to the creeks and to Second Marsh. This could also have negative impacts on the viability of cold-water fish in the creeks and on the water levels of Second Marsh, to which aquatic habitat is intricately linked. • Areas which encompass and surround the route of the proposed freeway have not been thoroughly inventoried the habitats of endangered species may not yet be completely understood. Increased noise, air and light pollution may have impacts. • The construction process and resulting alterations could result in increased sediment, heavy metal, chloride and other toxic contaminant concentrations. The necessary clearing of vegetation could limit the amount of vegetative food sources available and could cause stream temperatures to increase with the loss of overstory shade. These conditions could affect the habitat and viability of fish and aquatic invertebrates. • The development may work to reverse the years of dedication and commitment for those who have worked to preserve the area, if the impacts are found to cause adverse effects. Concerns that millions of tax and charitable dollars which have been invested over the years will be overlooked.
Duffin-Rouge Agricultural Community c/o B. Flattery Locust Hill	• "Fast-tracking" 407 all the way to Brock Road is already causing serious disruption in the community. At least five members of the association have received notices from the Ontario Realty Corporation to vacate their homes by September 1997. • Quite likely, one exit at the new Markham Bypass and another one further east, when needed, to serve the planned Seaton community, would be more than enough. • A major rural study for the Pickering side of this community is scheduled to begin in the next couple of weeks and be completed around the end of the year. From the point of view of the association, the EA for the 407 should respond to the results of this study, and not the other way around.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

Friends of the Farewell Courtice	• Happy that PEO Recommendations on 407 safety such as crash protection will be implemented to correct past mistakes. • Natural constraints such as fog, which is a major component of the groundwater system, encroachment on headwater, streams, etc. should also be considered in the EA document. • The Oshawa/Clarington link would run through 2 provincially significant wetlands, 1 bog, and would eventually destroy Second Marsh in Oshawa. • Maps are not accurate: the link is shown as just touching the wetlands but in reality the entire area of the median, shoulders and future extension would swallow all of the wetlands. • The natural water flow would be redirected along the granular bedding for the highway away from the streams flowing through the wetlands. The hydrological regime of these cold stream creeks will be altered, sedimentation and possible contamination would be increased and woodlot linkages would be disconnected. • According to EA, 1992, major impacts on ecosystem integrity would occur: 1.6 ha of fisheries would be severed, spawning grounds for salmon would be affected, 24.3 ha of woodlot removal. There would be 187.9 ha impacted from a 2 lane highway. • Efforts from individuals, businesses and schools to preserve Second Marsh would be wasted. • Request to reconsider the Oshawa/Clarington link running through the proposed area and instead to use the existing roads for the connection between 401 and 407, as it was done up to the 404 highway. • Quite a few new homes were and are still being planned along or directly on the planned route, it would be unfair to these families if the proposed development were to occur. • The position of the link is incorrectly planned: There would be an unproportional distance between exits/entries to or from the 401. The distance between Harmony and Courtice exits is too great. Residents of Oshawa/Courtice would have to travel back 1 to 3 miles to take the route. • If the development occurs, the 407 structure in Courtice should be completely raised to minimize the impacts so that the whole ecosystem and the quality of water entering Lake Ontario would be protected and businesses would not be displaced.
S. Cows Whitevale	• Concerned about the proposed route of the 407 across the Rouge River and West Duffin's Creek. • Concerns that amphibian population is decreasing and the EA report notes that vulnerable species are located in the waterways. The construction of the highway will adversely affect the population with road de-icing, noise and contaminants. There are valuable wildlife habitats that will be affected. • Adequate drinking water should be provided to residents whose wells will be contaminated. • There is a proposed access road through Whitevale village via the North Road. This road must be built to access the 407 because it will destroy Whitevale, a heritage hamlet from noise pollution problems.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

S. Leahy Brooklin	• Sufficient time was not given for people to assess the EA and to formulate views. The EA is inaccessible as one copy was provided for 60,000 people during office hours only. • There have been inadequate methods employed to inform the public. Many residents of Whitby and Brooklin are unaware that Highway 407 has been proposed. • Request that the public be given until December 31, 1997 to respond to this stage of the 407 East EA process. • The Traffic Demand Forecast model greatly overstates the future east-west travel demands as it relies on 1990-91 statistics. These numbers have decreased in recent years. • The EA does not properly assess alternative methods of transportation. Municipal transit authorities, along with GO Transit appear not to have been given an opportunity to plan an integrated multi-model transit system that could address short and long term traffic problems. • The EA ignores the Region of Durham's own Official Plan and its projection that one out of every two residents will be employed locally by the year 2021. • The impact that telecommuting, trip sharing and high occupancy vehicle lanes could have on reducing traffic demands is not considered. • There is no analysis of the human and financial cost of traffic accidents for any of the stated transportation alternatives nor the Highway 407 itself. • The EA does not examine how this reduced air quality will impact on the health of residents nor does it take into account the increased health costs and loss of productivity this will impose on area municipalities and the province. • The impact that higher noise levels will have on health and quality of life is not discussed. • The EA does not take into consideration the value of the current and future food production that will be lost in the 381.5 ha of Class 1 and 2 farmland that it proposes to use. • How will mitigation measures be used to minimize impact on wildlife corridors. • We should look at other areas as examples for their attempts to reduce car use.
B. Driscoll Markham	• Against the development of a transitway in a separate corridor adjacent to Highway 407 at Steeles Ave and the Pickering/Markham townline as they have lived on the townline for 17 years. • Tenants in Whitevale and the Duffrin-Rouge Agricultural community have suffered over expropriation and now land sales at unreachable prices, and they do not want to deal with urbanized traffic flow. • Would like to keep the area as a quiet, farming community. • Must deal with the same kind of vigilance as during "People & Planes" at the time of expropriation.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

L. James Scarborough	• From working with a group of volunteer citizens from communities along the route of the proposed highway, the effects which this proposed mega-project have become evident. The project will have negative impacts as it involves the entire social and economic structure as well as environmental health of every community within several miles of the route. • The EA documents expected impacts but does not offer any creative solutions nor does it seriously address alternatives. • Since the EA is inadequate, the minimum request would be to initiate a full hearing and a detailed study of alternatives. • Provincial attention is needed immediately on controlling urban sprawl and pressure on greenfields. • The development does not serve vulnerable groups such as senior citizens and those who don't own cars. • Poor planning which promotes sprawling suburban development and lessens the need for public transit should not be undertaken. All future development must require developers to provide transit access, not more roads. • Since taxpayers are paying for the first billion dollars of this development, there should be full cost accounting of the first year's operation. • The contracted section of 407 beyond 404 should taper down to park and ride.
B. LaCourciere Taos, NM	• The development will promote urban sprawl and will not promote preservation of heritage homes. • Concerns with fertile farmland being eliminated. • Road access is adequate as it exists. • Sprawl should only be allowed to occur on the outskirts on the city of Toronto, not extending past the richest farmland.
L. Almack Claremont	• Extending 407 east of Markham is evil, polluting, uneconomic and injurious to the public interest. • Concerns that undertaking will destroy most productive farmland needed to feed an exploding population. • Undertaking is a subsidy to encourage urban sprawl, commuting, bedroom communities, more regional roads and inefficient urban form which injures Ontario's competitiveness and is high cost/ low benefit infrastructure. • Encourages the use of private autos which is the worst generator of green house gasses. • The public would be better served with high density public transit and affordable housing within existing low density urban boundaries. Unaffordable infrastructure takes scarce resources from more efficient, transit, quality education, social welfare and the development of efficient attractive cities. • The auto industry should not be subsidized with taxpayers money or at the cost of the environment. • An alternative is to route the 407 south west of the Rouge Park to merge with a fully developed 401. Make all provincial highways fully self financing toll roads starting with the 400 series. Highways and transit should compete on an even field.

EA Review: Highway 407 / Transitway
(Markham Road Easterly to Highway 7 East of Brock Road)

J. Robb Scarborough	• Request a complete response to their questions and would like a copy of the review. • Has the widening of 401 improved the east west movement of traffic through Toronto and what is the average daily 401 traffic flow for each of the last ten years at Brock Rd, at Markham Rd and at McCowan Rd?
K. O'Connor Scarborough	• What is the expected level of service for each section of highway 401 from Brock Road to highway 404, after the highway 401 improvements are complete? • The completion of the highway 401 widening will provide a no-cost alternative to highway 407, particularly during non-peak hours. Has the EA considered the effect of the highway 401 widening on the timing of, and need for, the highway 407 extension and the economic viability of highway 407 as a pay for use toll road? • How is the MTO practising traffic demand management to reduce the problems caused by long-distance urban commuting and does the MTO have any plans to extend the highway 407 tolling system to highway 401 or the highway 401 core lanes? • Does the EA's prediction of future traffic demand contain a careful assessment of the traffic-demand patterns for the 21st century and the growing importance of tele-commuting, flexible hours, home offices and pollution reduction objectives e.g. Agenda 21 carbon dioxide reduction agreement? • Will any decision on the further extension of highway 407 await an assessment of the financial viability of the first phase? • What legal and financial provisions are in place to ensure that the Ontario taxpayer does not get stuck with the bill if the 407 toll highway fails to pay for itself? • Why is the MTO spending scarce resources on the further extension of highway 407 in an area with other planning and transportation options when they do not have the funding to maintain existing highways in areas of the province which have fewer transportation options. • What are the development agreements or plans for the provincial lands (e.g. Cornell) which will affect, or be affected by, the decision on the extension of highway 407? • Urban planners believe that the undertaking will subsidize the type of urban sprawl which consumes valuable farmland and green space and generates higher taxes by creating unsustainable suburban infrastructure growth and escalating services and infrastructure maintenance costs. What mitigation measures are being taken to ensure that this does not occur? • Concern that undertaking will subsidize long-distance commuting to work, increasing traffic congestion and smog in Toronto and increasing respiratory health care costs. • Concerns for urban decay which arises when a large number of long-distance commuters consume the services of a city without contributing to the financing of these services through property taxes. • Will a significant portion of any tolls for the extension of highway 407 be dedicated to improved public transit throughout the GTA? • What mitigation/compensatory measures are proposed to buffer greenhouse

EA Review: Highway 407 / Transitway
 (Markham Road Easterly to Highway 7 East of Brock Road)

J. Robb and K. O'Connor (continued)	• What is the estimated cost of the extension for the following categories: planning and approvals; total design and construction; bridging over the Rouge Valley; bridging over the Little Rouge River Valley; bridging over stream and rivers; bridging over roads; and interchanges with roads? • Will a significant portion of any tolls for the extension of highway 407 be dedicated to improved public transit throughout the GTA? • What are the estimated annual maintenance and infrastructure renewal costs for the Highway 407 between highway 48 and Brock Road? • Will highway 407 increase surface water discharge to the Rouge River, the Little Rouge River, other Rouge tributaries, or other streams and if so by what volume to each stream? • At capacity and over the length of extension, what is the highway traffic's total estimated annual loading (kg) for carbon dioxide, carbon monoxide, sulfur dioxide, No_x, ground level ozone, heavy metals, and particles less than 10 microns. • What are the highway's estimated salt and metal loadings (kg) to surface and groundwater within the Rouge River watershed? • Instead of culverts, will the highway 407 extension have regularly spaced underpasses (e.g. every 500 metres or less) to ensure the highway does not sever pedestrian, bicycle, equestrian, stream and wildlife corridors? If not, could this design deficiency raise issues of "due diligence" and associated economic consequences regarding the failure to take adequate steps to avoid deadly traffic/people/wildlife conflicts?
D. Edgell Markham	• Any construction that does not optimize the use of valuable waterways such as the Rouge River, Rouge Creek, West Duffins Creek and Duffins Creek is unacceptable. • Must avoid the creation of wastelands beneath highway overpasses, especially when the potential to enhance accessibility to valuable conservation areas exists. • The fragile ecosystems may become endangered or rendered inaccessible if imaginative and creative ways are not found to build environmentally friendly overpasses. • Slightly extended overpasses over the rivers could be constructed broad enough to incorporate small gravel roads along the undeveloped waterways providing passage for hikers and easy access for emergency and maintenance vehicles. Accessibility and visibility in construction would help to ensure the security of these sites. Appropriate but discrete fencing would prevent humans and animals from straying onto the highway. • Drainage preventing road salt and road spills from contaminating the water and destroying the natural habitat is essential. • Lighting, rest areas, scenic look outs, architectural design and selection of construction material could enhance the area and demonstrate that we are proud of our ability to construct a highway that demonstrates our respect for our resources today and our commitment to the future. • The alternative of dried up contaminated river beds devoid of wildlife will only reflect urban decay and the advance of the concrete jungle.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

G. Boxen
Richmond Hill
(first submission)

- Residents in Cedar Grove were notified last week by the Ontario Realty Corporation that they are to vacate their homes by the end of September, even though the EA has not been given approval yet
- Landowners have lost their rights for a hearing on expropriation of their land.
- Planning problems: Original purpose was that it was meant to be a Toronto bypass that would relieve congestion on Highway 401. The large number of interchanges indicates that Highway 407 is meant to meet more local needs. Building more highway to solve the problem of the highway's presence is a strange and expensive remedy.
- Transit is not being considered seriously as it should be given priority over new highway work.
- Politicians want to use the 407 as a catalyst for commercial development but the 401 has not achieved the desired commercial development, therefore it is questionable that the 407 would achieve more than the 401.
- Certain assumptions are made within the EA to address the goal of meeting future traffic demands and contradictions are made which show why better roads are not the answer to transportation problems.
- Although Cornell will have services accessible by a 5 minute walk, Markham politicians are arguing Hwy 407 is necessary to support the increased traffic volume it will generate outside its borders.
- Hwy 407 is being offered as a cure for local congestion but a major increase in traffic is anticipated.
- Roads that offer free flow of traffic, such as the 407, encourage people to drive further to access services.
- Transportation planners state that increased public transportation will require more road lanes even though buses decrease car traffic.
- The recommendations made in the report "MTO's Northeast Metro/Southeast York/Durham Strategic Transportation Review" to live and work in the same area and to promote more transit-conducive forms of development have been ignored in the EA.
- In meeting the goals for movement of people and goods in the area, the requirements of people and goods should be focussed on and not of cars and trucks.
- Air quality and safety should be improved by decreasing transportation demands.
- Road safety should be improved through road design and by decreasing road use.
- Farmlands should be maintained as local markets are growing and local food sources decreases transport needs. If more than 4 lanes of highway are eventually built, significant losses of Class 1 and 2 farmlands will be removed permanently.
- Recognize our natural assets of river systems and greenspaces as ends in themselves as a means of removing CO₂ from the air and putting back oxygen. CO₂ emissions and climate change are also not addressed in the EA.
- The fishery habitats should be focussed on. No indication is given as to how MTO will avoid degradation from clearing vegetation, filling sides when the bridges are built, highway runoff etc.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

G. Boxen (continued)	• The serious issue of air quality was only given a passing comment with regards to the beneficial effect of improved public transit. • Reliance on expressways rather than transit and other modes will ensure the continued increase in traffic. • A switch now to more efficient systems of transportation such as buses and truck that can be later be adapted to hydrogen or solar power will help to lessen the impact of future fuel shortages and the shock of oil price increases. • The assessment is dismissive of alternatives to Highway 407. • Comments regarding the impacts of improved transit services on economic development were written with no understanding because transit has a greater potential for economic growth since it can carry higher volumes of people. • The correspondence between MTO and other government agencies show the reluctance of MTO to acknowledge environmental issues and to commit to mitigation of negative effects on the environment. • Officials from MTO and Ecoplans failed to take note of significant wildlife that was pointed out to them by local citizens in the provincially significant area of Second Marsh. • The short time given to reply did not give the public an adequate study of the extensive material available.
A. Barrington Brooklin (Petition of 21 signatures)	• Nearly everyone he (Mr. Barrington) has spoken to about the 407 felt that there was not enough information about the project and that more time is needed for the public to understand the issue. • The EA was not available to the residents of Whitby until after April 16, 1997. Only one copy was made available to be viewed Monday to Friday between 8:30 am and 4:00 pm. Public comments were only accepted up to June 6, 1997. These conditions did not allow enough time for residents to become aware of, read, obtain additional information, ask questions or comment on the EA. • A number of new residents have moved into the Town of Whitby and Brooklin in the past few years and are unaware of the proposal.
M. Lamb Toronto	• Highway 407 will destroy thousands of acres of food-producing farmland. Ecosystems are disrupted with vast stretches of pavement and water sources will be affected. • Concerns that development will promote auto use which leads to global climate change. Canada has already reneged on its commitment to stabilize CO₂ emissions at 1990 levels. • Concerns that increased smog from auto use will cause severe health problems. • The proposal is an outdated solution. Planners now agree that suburbs are a mistake and superhighways are part of that same ideology. We should be looking to sustainable solutions such as subsidies for mass transit, cycling and other forms of non-polluting transportation. • The taxpayers will shoulder the burden of a highway which is not needed for years to come.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

L. Gasser Orono	• Submitter has made comments on the proposal at meetings and has given written comments but the "Breakdown of Comment Sheet Origin" does not indicate this. • The proposed route will affect pasture and crop lands, forested land and a stream running through their property. • There is no real need for the undertaking. The trucking industry has stated that it would not use the 407 because of the tolls and many drop off points are off the 401. • GO public transit could be expanded to service the GTA communities, with those beyond being able to hook-up to GO services. • By not offering public transit alternatives we are forcing many seniors to continue driving long past the time when they should be. There should be alternatives available for those who are tired to drive, during bad weather etc. • Dollars invested in vehicles should be spent on education, cultural pursuits etc. • The 407 will go through prime agricultural lands in the Durham Region even though agriculture is the number two industry in this area. • Concerns for native species of plants and animals that will be exterminated due to development. • Development will be encouraged outwards and new residents will demand expensive municipal services to be brought ever further out and will cause decay in the inner city. • Concerned with what this highway will do to all the streams and groundwater that spring and/or are fed by the Oak Ridges Moraine. • The first part of the 407 is unsafe and is built to minimum standards, will there be improvements to the remaining developments? • There is a problem with fog in the area, which leads to unsafe driving. • Concerns that a full EA is not being carried out due to the government's sense of urgency.
R. Reesor Stouffville	• Farms at proposed 407 extension at Reesor Road in Markham. • Concerns with plans to use culverts over several environmentally significant areas. • The emissions from the 407 will be higher than any modern garbage incinerator. Due to magnitude of environmental impacts that will occur, the environmental approval process should be at least as rigorous as for any proposed incineration proposal. • The 407 will not relieve congestion as commuters will not be willing to pay the toll. • The highway is only going to be constructed to serve the public for a few hours a day for a few days a week since the only time when there are traffic problems on existing highways is during rush hours. • There are more appropriate uses of this money. • Alternatives such as car pooling, widening Steeles etc. should be explored as they have lower impacts on the environment. • Markham Town Council should not have this much influence on the decision making process of the Province of Ontario.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

R. Reesor (continued)	• Concerns for preserving natural features of area and productive farmland. • All of these decisions are being made on projections from consultants reports with many assumptions. • It is the duty of the government to provide alternatives such as public transportation in order to make reasonably efficient use of the existing highways. People have the right to work and live wherever they want and no one is forcing people to commute. • There are no existing incentives to use alternative methods of travel such as car pooling lanes. There is a large number of single person vehicles during rush hours and reasonable incentives should be provided to these people. • Transportation engineers must be able to think of more creative ideas for solving traffic problems. We should look at the example of the Europeans. • The higher the level of Ontario government subsidy to the car the more difficult it is going to be for mass transportation to compete. The people creating the auto pollution must be taxed to the point where it is no longer just convenient to drive by themselves. It is up to the government to provide the incentive and the alternative and then the public can choose. • If a true technical analysis was conducted one would determine that the problem exists only in a narrow time frame and that the route or cause of the problem exists only in a narrow time frame. The cause of the problem is the number of single person cars, not the actual number of people travelling. • We think of future generations and strive towards the most energy efficient, ecologically friendly techniques of moving people. • Local political pressures and industrial lobbying often make the decision making process one sided. We should still work to exert control over emissions etc. • Concerns with effectiveness of public participation methods.
J. Thompson Whitevale	• The report was written by people who must justify its construction and decide upon the details; there was not very much discretion in where the highway has to go and alternatives were not considered. • The lands through which this Highway will go are the last remaining significant open and agricultural space adjacent to Metro Toronto. Highways breed development which envelopes even more land. • In the document, many times the phrase "not significant" comes up as an apparent justification for the imminent destruction. The authors forget that the real significance is that this open land still exists. • 407 will encourage the eastwards sprawl of Markham, it will encourage airport development on the public lands completely. • Concerns that views will not receive a sympathetic hearing in MTO or MOEE. • Ending 407 at Markham Road is nonsensical. Pending resolution of the many problems to be faced in and east of Markham, 407 should not be opened for general traffic any further east than 404. The development of the Transitway west of 404 and from 404 to 48 should be expedited. Until it is ready, the already constructed roadway east of 404 should be used only for transit, with part of the 404/407 interchange to the east being used as a transit hub and exchange.

EA Review: Highway 407 / Transitway

(Markham Road Easterly to Highway 7 East of Brock Road)

J. Thompson (continued)

- Extension of the 407 east of 48 should start with the Transitway, or the roadway should be restricted to use by transit vehicles. The construction should proceed east to Durham Road 23 and then loop down to the 401. Only when the complete link to 401 is completed should 407 east of 404 be opened to normal traffic. Until then, the use should be only for transit vehicles, and even after that transit should be given total priority.
- New and expanded GO train service should be introduced using existing railway lines, linking to the Transitway at appropriate crossings.
- The destructive impact on the environment must be kept to an absolute minimum.
- East of 48 the highway is proposed to go through open country. There must be no lighting on the road while it is in the rural environment. Road bridges across streams and valleys should have very high walls, if they are not completely enclosed as elevated tunnels, to reduce the noise which will be channelled down river valleys.
- Run off (rain, slush etc.) From the road must never be allowed to enter streams and watercourses, or pollute people's wells.
- Buildings of any possible historical and cultural interest should be moved, not destroyed. Many more small bridges, or very wide, natural bed culverts, should be part of the construction so that interference with the natural watercourses be as little as possible.
- Protection for the wetland and other significant areas, especially in Units 1370, 1484, 1530 and 1550 should be enhanced.
- Concern for the effects that the undertaking will have on natural features of the surrounding area.
- The undertaking is a product of outdated planning, entirely unsuited to the needs of the next millennium.

EA Review: Highway 407 / Transitway
 (Markham Road Easterly to Highway 7 East of Brock Road)

G. Boxen Richmond Hill (second submission)	• The effects from the opening of the completed section of Highway 407 are now observed. • Purpose of the 407 is to relieve congestion on the 401, but a MTO study has shown that new roads initially relieve congestion by 10%, but return to previous levels within a few years. With the 407, congestion is increased and there is new demand for larger road capacity. There are traffic increases on roads such as Leslie and Bayview that feed onto the 407. • The congestion on Highway 7 between West Beaver Creek (west of Leslie St.) To east of Woodbine Ave has not decreased. Traffic flow could be improved greatly by a better coordination of lights. • Measures in the past have addressed the problem of congestion and other measures such as better transit will be needed. • Areas of low traffic volume on Highway 7 have decreased further. Highway 407 has also contributed to increased congestion southbound on Highway 404, in particular, north of Sheppard Avenue. • Highways allow separate local economic areas of activity to integrate more fully and they create an increased demand for roads. • If there is a shift from local arteries to highways for commuting, there is a loss to businesses along the roads now bypassed. • As 407 makes commuting feasible to developments around recreational areas such as Lake Scugog, people must travel farther to meet their leisure needs. As we push green spaces further away by highways and resulting development, we increase the travel distance to recreational areas and create a new need for more highways. • Subways and LRT's can handle larger volumes of riders and they can help relieve congestion and make high density development feasible. • The loss of farmland, wetland and other wildlife habitats are the most serious and difficult effects of road building and development to reserve. As we continue to lose productive land worldwide to desert and development, we have to be mindful of the fact that we are building the 407 on land that is currently in food production. • Smog is becoming a problem in areas outside the Metro area, such as in the York Region. Roads add to traffic volumes and therefore do not improve air quality. • The grave repercussions of extending Highway 407 eastward calls for a full hearing. Only solid data showing overwhelming evidence of the superiority of Highway 407 over other modes of transportation, such as rail and public transit in meeting the transportation needs of the area, should allow extension of the highway. The hearing should address social impacts such as losses to local businesses, and the costs of environmental impacts compared to alternative transportation.
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RECEIVED
July 17/97

1

117 Old Surrey Lane
Richmond Hill, Ontario, L4C 6R8
Wednesday, July 16, 1997

Highway 407 / Transitway EA
Mr. Nigel Wood, Review Co-ordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario M4S 1H2

Re: Highway 407 / Transitway Environmental Assessment Report

Dear Sir:

This submission is being made in view of the fact that effects from the opening of the completed section of Highway 407 now can be observed and evaluated. Some results have been unexpected. Insights arising from the reported and personal observations of the impact of 407 will be described below.

Congestion

Although it is not designed as such with its numerous and frequent interchanges, the 407 has been promoted as a Toronto bypass to relieve congestion on the 401. I have come to understand that highways do not relieve congestion, except, perhaps, in the short term. (An MTO study showed new roads initially relieve congestion by 10%, but return to previous levels within a few years.)

Municipalities have viewed the construction of Highway 407 as a means of relieving local congestion. York Region's experience shows Hwy 407 brings no relief in congestion. Rather, the unforeseen results with Hwy 407 shows how highways can increase congestion and create new demand for larger road capacity.

The unexpected findings with 407's opening are greater than predicted increases in traffic volumes on roads such as Leslie and Bayview that feed the 407 ("Traffic from 407 creates driving nightmare for region", Liberal, Richmond Hill edition, Tuesday, June 17, 1997) and greater than expected use of the 407 ("Hwy. 407 more popular than Palladini expected", Liberal, Richmond Hill edition, Sunday, June 22, 1997). This increase in traffic is the reason for Markham's objecting to stopping the next phase at Hwy 48 and wanting it to continue to Brock Road.

Furthermore, the congestion on Highway 7 between West Beaver Creek (west of Leslie St.) to east of Woodbine Avenue has not decreased. The congestion exists because of the concentration of commercial and retail activity along that stretch. Richmond Hill and Markham's commercial

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parks and big box retail stores bring heavy traffic to the area. New development is still taking place on a large scale. Traffic has always been slowed by the lights at exits from Hwy 404 but is now at times approaching gridlock. Traffic flow could be improved greatly by a better coordination of lights.

Preceding much of the economic development described above, was substantial residential development around Highway 7 in the 1980's. Commuting created serious rush hour congestion on Hwy 7 between Bayview and Leslie. This was relieved by two measures. The first, an addition of two extra lanes, resolved most congestion. The recent bridging of Bayview over Hwy 7 eliminated the delay caused by left-hand turns at the Bayview-Highway 7 intersection but has made bus transfers extremely difficult. Unfortunately, Go train service has been cut back despite overcrowded trains arriving at Union Station. Two-way service was to be instituted to bring workers north, but has been indefinitely postponed.

To repeat, Hwy 407 has not relieved congestion on Hwy 7. Other measures in the past have done so, and others such as better transit, will be needed to meet current and future problems.

Surprisingly, an area of low traffic volume on Hwy 7 has decreased further. This result is due to the fact that the light traffic in certain areas such as the section between Bayview and Dufferin is mainly bypass traffic and so has shifted to the 407. The traffic between Bayview and Dufferin decreased after the 1989 recession and has never fully recovered. Please note, in the area between Bayview and Keele, traffic is now so light that the 6 lanes on Hwy 7 are practically empty.

I have personally noted that Hwy 407 has also contributed to increased congestion southbound on Hwy 404, in particular, north of Sheppard Avenue. Previously, southbound traffic would be a problem just north of Hwy 401 as it merged and it would continue to be heavy until south of York Mills. Since the opening of highway 407, the traffic on 404 has increased to the point of being stop-and-go a kilometre north of Sheppard as well as on the Sheppard Avenue exits. The 407 has also caused problems around the 400 and 427 interchanges.

Highways Create New Demand for Highways

Highways obviously change traffic patterns. Until they become congested (and create demand for new highways) highways make previously distant destinations very accessible. Whether a destination is considered local or not depends on the travel time, not on the actual distance. Usually anything within a 15 minute trip, independent of distance, is a local trip. If the usual mode of transportation, walking, biking, car, or transit, can get one to a desirable shop or service within a quarter hour, that stop can become a frequent, routine destination.

We are willing to take up to an hour and a half to reach work, college or recreation. With Hwy 407 reducing driving time from Richmond Hill to Mississauga to 15-20 minutes on the highway plus time to get to and from the 407, Peel region becomes more feasible for frequent shopping and entertainment. Hwy 407 brings Waterloo Region 15 minutes closer and makes it an easier

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work commute and more likely recreation destination. We can see that highways allow separate local economic areas of activity to integrate more fully and create larger geographical ones with greater driving distances and more demand for roads. Rail has done the same by moving large volumes of commuters and goods with less stress on the environment. Rail allows movement within a large economic unit without creating the same demand for roads because it currently does not provide the same ready accessibility and convenience for frequent long distance shopping and recreation. As a result, rail is less disruptive to local business and the economic-social integrity of the community.

Highways Spell Trouble for Local Retailers

Normally, commuters will often do errands en route when walking to transit or at transfer points or when driving if there is easy parking. If there is a shift from local arteries to highways for commuting, there is a loss to businesses along the roads now bypassed. Further losses to independent retailers occur when highways make big box retail centres accessible for a large catchment basin.

Cottage-Country Traffic

The June submission noted that transportation demands would increase with the removal of farmland near the GTA. Hwy 407 has been seen as a way to help relieve weekend traffic on the 401. As 407 makes commuting feasible from developments around Lake Scugog, the Peterborough cottage-country, and other recreational areas, people will have to go farther to meet their leisure needs. Thus, the loss of recreational land to highways and development in and around the GTA puts added pressure on roads to accommodate greater driving distances.

As we push green spaces further away by highways and resulting development, we increase the travel distance to recreational areas and create a new need for more highways.

Alternatives

While highways tend to promote sprawl as they make further destinations more accessible, subways can promote compact development. Because of the high volumes of riders subways and LRT's can handle, they can help relieve congestion and make high density development feasible.

Go trains can move commuters from more distant communities saving the need for many lanes of highway.

Energy Use, Carbon Dioxide Production and Climate Change

One the eve of the June 23rd "Earth Summit & 5", Stephen Handelman outlined the agenda in a Star article (Toronto Star, Sunday, June 22, 1997). Included were energy and climate. Energy consumption continues to increase while climate change has accelerated. The evidence of climate change is seen in the severe flooding of the Saguenay and Red River as well as severe drought

4

in other areas (Rosemary Speirs, Toronto Star, June 1997). There was an announcement the week of July 6th that demand for oil worldwide has increased faster than anticipated.

Desertification

Another problem on the agenda was loss of productive land. The loss of farmland, wetland and other wildlife habitats are the most serious and difficult effects of road building and development to reverse. "...1 billion of us live in brown patches, on soil that's crumbling to desert because of encroaching cities, badly managed cropland, or scarce water. It's called "desertification" and it threatens a quarter of the Earth's land mass" (Editorial, Toronto Star, Monday June 17, 1997). It is time to connect the building of highways with the worldwide desertification. If we are serious in our commitment to the environment and fighting desertification, and we are if Canada "is pumping \$800 million primarily through the Canadian International Development Agency into projects to improve dryland crops, water supplies, farming techniques, conservation, pest control, soil management, reforestation, drainage and land reclamation...", we will not continue to build Hwy 407 through one of last areas of prime agricultural land in Southern Ontario.

As we continue to lose productive land worldwide to desert and development, we have to be mindful of the fact that we are building the 407 on land that is currently in food production.

Noise

A comment on noise from Hwy 407. The ridges on the concrete surface cause a high pitch whining tire noise heard by car occupants that disappears when driving over asphalt areas.

Air Quality

The lack of comment on air quality in the EA report was addressed in the last submission. The growing severity of the problem is evident in York Region. Since 1994 one's nose signalled a change. Now, smog is no longer something to viewed just to the south over Metro. For the first time, (July 14-16, 1997) smog is enveloping southern York Region. From Elgin Mills Road in Richmond Hill, haze can be seen also to the north, east, and west. It is presently hanging over crop lands with low level ozone destroying vegetation. As the smog extends, its negative, and often fatal consequences to health extends.

What is the answer? There appears to be an American belief that because poor air quality is caused by idling traffic, the best way to relieve congestion and the resulting air pollution is to build more roads. I have observed since 1994 that air quality has suffered along Highway 7 during hot periods. Starting in May one can smell pollutants when driving in traffic that is moving. Building more roads is not the answer. Roads add to traffic volumes and therefore do not improve air quality. Canada has asked that carbon dioxide reduction targets be softened because emissions have increased by 9% since the Rio Conference.. We have to get cars and trucks off the roads. Using green space for new roads decreases the nature's ability to convert carbon dioxide to oxygen. Putting into place convenient transit along the 407 corridor and emphasizing the use of the rail for goods would alleviate the need to extend Highway 407.

Conclusion

The building of Hwy 407 east of Hwy 48 will have serious consequences including

- damage to the river systems and wetlands,
- loss of prime agricultural land,
- increased CO2 levels and smog, including ground ozone which damages lungs, crops, and buildings,
- rising health costs because of injury due to collisions and increases in hospital admissions for cardiac and respiratory problems with deteriorating air quality.

The grave repercussions of extending Hwy 407 eastward calls for a full hearing. Only solid data showing overwhelming evidence of the superiority of Hwy 407 over other modes of transportation, such as rail and public transit in meeting the transportation needs of the area, should allow extension of the highway. The hearing should also examine social impacts, losses to local businesses, the full cost of building, maintaining, and policing Hwy 407 and the increased cost to the health care system and the costs of environmental impacts compared to alternative transportation.

We must be assured that Hwy 407 is significantly better than the alternatives and be informed of its full economic, social, and environmental costs before any further construction goes ahead.

We may at a future date devise a new mode of transportation and solve the problem of air pollution. We may even rip up roads as we now remove train tracks. However, the agricultural land will be expensive and difficult if not impossible to replace in the future.

Thank you for your time and indulgence.

Yours truly

Gloria Boxen

1 enclosue

cc MTO

Traffic from 407 creates driving nightmare for region

LIBERAL, RICHMOND HILL EDITION
Transportation officials say governments can't afford to fix roads

BY LISA QUEEN
STAFF WRITER

Hwy. 407 may be a model for international transportation officials who see toll roads as the way of the future — but to local councillors, the new highway is turning into a headache.

The 407 is the hot topic for more than 3,000 experts who are in Toronto for the International Road Federation's five-day convention.

"Privately built highways paid for by tolls are the only way countries can afford to improve their highway system," according to director-general Wim Westerbeek.

He estimates it would cost \$14 billion to bring Canada's

25,000 kilometres of national highways up to acceptable levels.

"Canada's road system has been deteriorating since the 1970s," Westerbeek said.

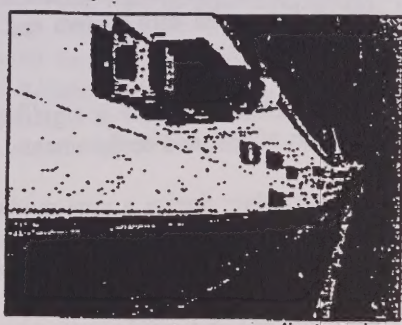
"But there's no way governments can afford the kind of money needed to improve the situation."

But try convincing Markham Mayor Don Cousens about the success of Hwy. 407.

"We have very, very serious concerns about the effect 407 is having on our communities," he told regional councillors last week.

The highway, which ends at Hwy. 404, is causing gridlock on surrounding roads such as Leslie Street, Hwy. 7, Steeles Avenue, 16th Avenue and Woodbine Avenue.

"It's a mixed blessing. We wanted 407," according to



Regional councillors are concerned about the effect Hwy. 407 traffic is having on surrounding roads.

Cousens. "I (but) the problem is bigger than anyone could have realized."

It is difficult to determine if

traffic patterns associated with the 407, which opened June 7, are permanent because the toll road is free for the first month.

Cousens is looking for help from the province to deal with the impact on local roads.

The Town of Markham is also asking Queen's Park to hand over \$650,000 to mitigate the problems when the highway is extended from Hwy. 404 to Hwy. 48 in the next phase.

Officials are worried the problems will hit the historic Markham Village if the highway stops at Hwy. 48.

They're calling on Queen's Park to extend the 407 to Brock Road right away, instead of waiting until the third phase.

Transportation Minister Al Palladini couldn't be reached for comment.

Cousens is hoping to meet with Palladini and Markham

MPP Dave Tsubouchi in about two weeks to discuss the issue. But it's not as if the problems weren't anticipated.

Both the town and the region predicted immediate traffic congestion on the network of streets surrounding the 407 when the highway opened.

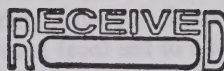
A January regional study that looked at the effects on Leslie said some intersections could see traffic volumes increase by more than 200 per cent.

Morning westbound traffic at Leslie and Commerce Valley Drive was expected to skyrocket 1,251 per cent.

Regional chairperson Eldred King also wants the planned partial interchange at 407 and Woodbine — the region's busiest road — upgraded to full on and off ramps in all directions.

From: FRIENDS OF THE FAREWELL
3200 Hancock Rd.
Courtice, On. L1E 2M1

May 26, 1997



To: Nigel Wood, Review Co-ordinator

Re: COMMENTS ON THE PROPOSED OSHAWA/CLARINGTON FREEWAY LINK

Dear Sir:

We are happy to see that PEO Recommendations on 407 safety such as crash protection for median bridge piers, lighting poles, reshaped median ditches, rumble strip on shoulders, improved information signing etc. will be implemented by MTO to correct past mistakes.

We also believe that **natural constraints like fog** that comes naturally in areas with **high but shallow water table level** that is the major component of groundwater system, **encroachment on headwater, streams, wetlands and their expensive and in most cases unsuccessful realignment, encounters with deer, etc.** should be considered as well.

Oshawa/Clarington link would be the only link which would run through 2 Provincially significant wetlands, 1 bog, which is unusual for this area, and would eventually destroy Second Marsh in Oshawa, another Provincially significant wetland. A similar situation occurred in Markham at Milnes Woods, where the whole area was drained into one small blob, as you can see on enclosed picture (1). Unfortunately, here in Courtice it wouldn't work the same way. **The whole ecosystem here depends on the movement of the water throughout the area and the groundwater recharge (2);** the proposed 310 m of channelization of cold stream creeks would not help either. Area for 407 link cannot be dealt with separately from the surrounding environment.

The information by Ecoplans to MTO and to the public was not accurate. The link is shown on maps just touching these wetlands; this may be the case for a 2 lane highway but in reality, the width including the median, shoulders and future extension would swallow all the above mentioned wetlands. There is nowhere shown in E.A., 1992, the interdependency of the surrounding ecosystem. We also find Ecoplans contributions to this study as a conflict of interest since the same company was working for developers in surrounding areas on E.I. studies and analysis.

The natural water flow here would be redirected along the granular bedding for the highway away from the streams flowing through the wetlands (3); even with water management, the hydrological regime of these cold stream creeks will be altered; sedimentation and possible contamination will increase, the woodlot linkages would be disconnected. According to E.A., 1992 1.6 ha of fisheries would be severed, spawning grounds for salmon would be affected, 24.3 ha of woodlot removal would have **MAJOR IMPACT on ECOSYSTEM INTEGRITY- 187.9 ha according to this assessment and this data predicted only the effect of a 2 lane highway, not more.** Millions of dollars spent, endless effort of not

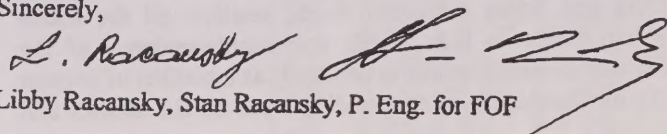
only individuals but also with help of business companies, schools to preserve Second Marsh in Oshawa would be wasted. Second Marsh is attracting more and more people to a place where they can relax; it is one of the focal points in local newspapers, is used for educational school and community programs, etc.

We are asking you please, to reconsider the Oshawa/Clarington link running through the proposed area and instead to use the existing roads (4) for the connection between 401 and 407, as it was done up to 404 highway. The current choice was preferred only to suit developers asking to build further along this highway and somehow our regional government was persuaded also. It is not choice of the public. Quite a few new homes were and are still being planned along or even directly on this planned route, which is downright unfair to these unsuspecting families. Furthermore, the residents of Oshawa/Courtice would have to travel back anywhere from 1-3 miles or more to take this route. Also, there would be unproportional distance between exits/entries to or from 401. The distance between Harmony (built-up area) and Courtice Rds. exits is too great, approximately 5.5 km. On the other side, the Oshawa/Clarington link exit/entry and Courtice Rd. exit/entry would be 500m or less and it would not protect traffic infiltration.

MTO brochure on 407 is stating that 407 would minimize altering of natural environment, that wildlife habitat would be protected, that 407 would not isolate the nearby environment (5). Thus, if you do go ahead and grant the developers' wish and not the public's, at least, the 407 structure in Courtice should be completely raised to minimize all the above mentioned impacts. Yes, it would be expensive, but at the end not only this whole ecosystem (Courtice and Second Marsh) but also the quality of water entering the Lake Ontario would be protected; also, it would save businesses (which we don't have too many of) that would otherwise be displaced.

We trust that our comments and concerns regarding our health and leisure will be considered just as the safety of 407 was. We appreciate that additional money was spent on safety features just to serve the public best. We would also very much appreciate if we as residents would be allowed to work with planning of 407 link in Courtice.

Sincerely,



Libby Racansky, Stan Racansky, P. Eng. for FOF

- Enclosure: (1) Milnes Woods-Markham-dewatering
(2) Significant groundwater recharge-Courtice, E.I.S., 1994
(3) Natural water flow-redirection along 407, O.P. Review, 1992
(4) Courtice Rd. as 407 link, 1975 O.P.
(5) Impacts on Nat. Environment, 407 brochure

cc: MTO-Central Region

John O'Toole, MPP Durham East

Ji m Richards, Friends Second Marsh in Oshawa, Director

Milne's Woods dewatering (1)



(2)

E.I.S. for Region, 1994

ECOLOGICAL SERVICES FOR PLANNING LTD.

- providing corridors for wildlife movement." (O.M.N.R., 1992)

The remnant woodlots displayed on Map 10 are what remains of the once extensive forested tract that connected the Farewell and Bowmanville Creek watersheds. The significance of this expansive forested area has been discussed in Section 3.6. This forested area controlled streamflow and water temperature in Farewell Creek and provided continuous and well-buffered wildlife habitat. Although greatly reduced in size and connectivity, these remnant woodlots provide important habitat for wildlife. Although interrupted, these two wooded areas are further connected to other remnant woodlots to the east resulting in a connection to the Bowmanville Creek watershed. The forested Creek Valleys remain relatively well connected, although they are disturbed by road and highway crossings.

The remnant woodlots provide a natural environment for the infiltration of water into the groundwater system. This natural filtration by the forest ecosystem provides a clean source of recharge to the groundwater system.

Much of the area displayed on Map 10 possesses a high water table and/or is underlain by sandy and gravelly soils which serve as significant recharge areas. Both the high water table and recharge areas are important for the maintenance of baseflows in Harmony, Farewell and Black Creeks. Map 10 shows that a significant portion of the original recharge area has been developed within the past 15 years. This development represents a significant loss in the supply of clean water to the cold water streams in the area. Farewell and Black Creeks are both classified as cold water creeks and their cold water status is highly dependent on baseflow and recharge from the surrounding area. The baseflows are not only important to the ecological well-being of the portions of the watersheds displayed on Map 10, but also for the downstream portions of these watersheds. As stated in Section 3.4, Harmony and Farewell Creek watersheds feed Oshawa's Second Marsh on Lake Ontario, a provincially significant wetland.

Discharge zones are not mapped due to the level of fieldwork undertaken for this project. Specific studies to identify discharge areas were not possible. It was assumed that all areas along the streams were important for discharge to the watercourse.

Table 2 displays a summary of the environmental features presently contained within the Study Area boundary and the ecological functions they perform.

(3)

A watershed represents a distinct biophysical unit, an ecosystem. The health and integrity of the various natural environments within a watershed is intimately tied to the movement of water through the watershed. Alteration to this flow of water may fundamentally alter the functioning of the watershed ecosystem. Because the use of land can significantly affect the movement of water through the watershed and therefore the integrity of the natural environment, the concept of land planning on a watershed basis is receiving increased attention. It is therefore important in any discussion of the natural environment, to understand how a watershed functions and how land use and man's activities can affect these functions.

O.P. Revie
1992
pg. 30

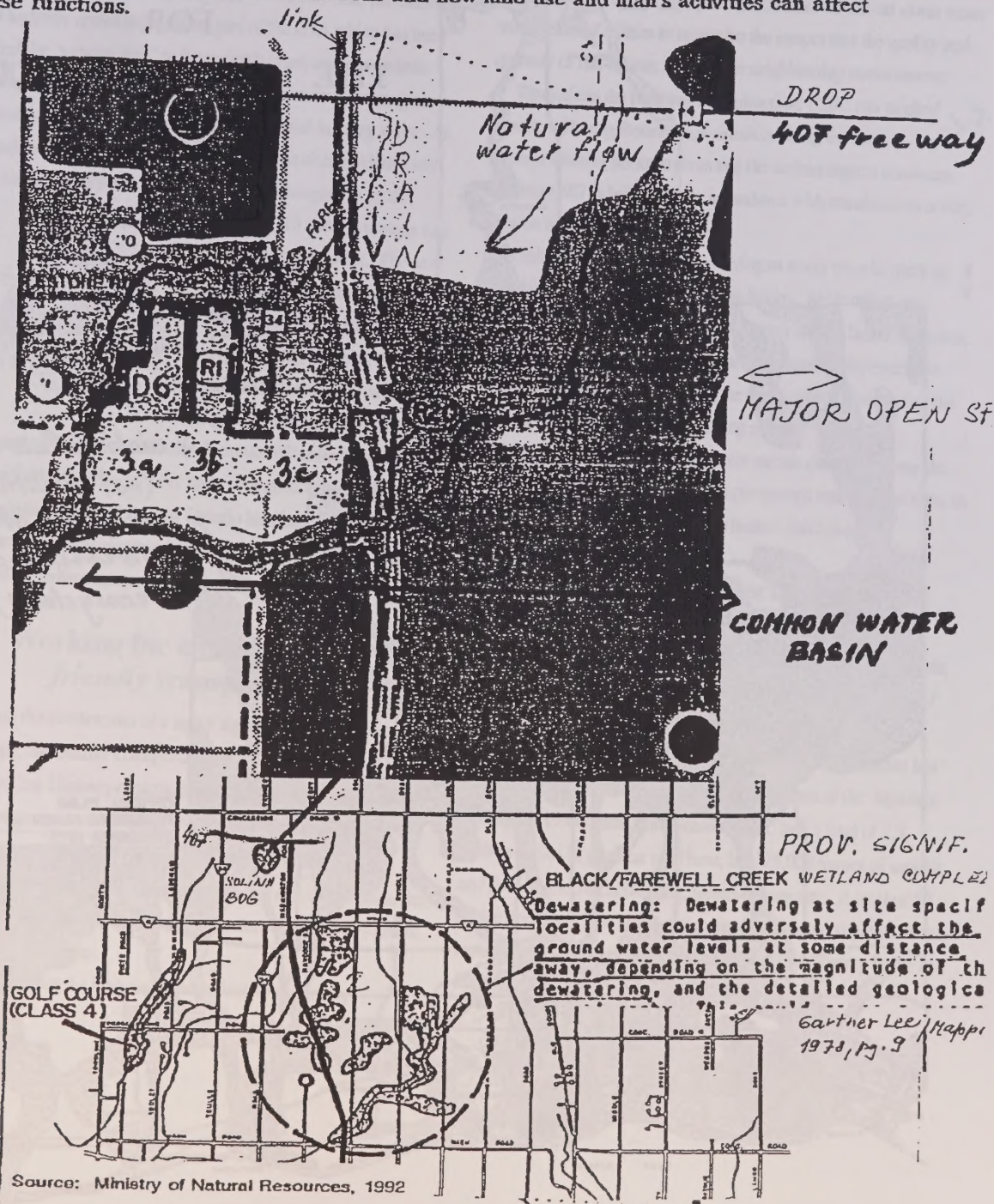


FIGURE 1

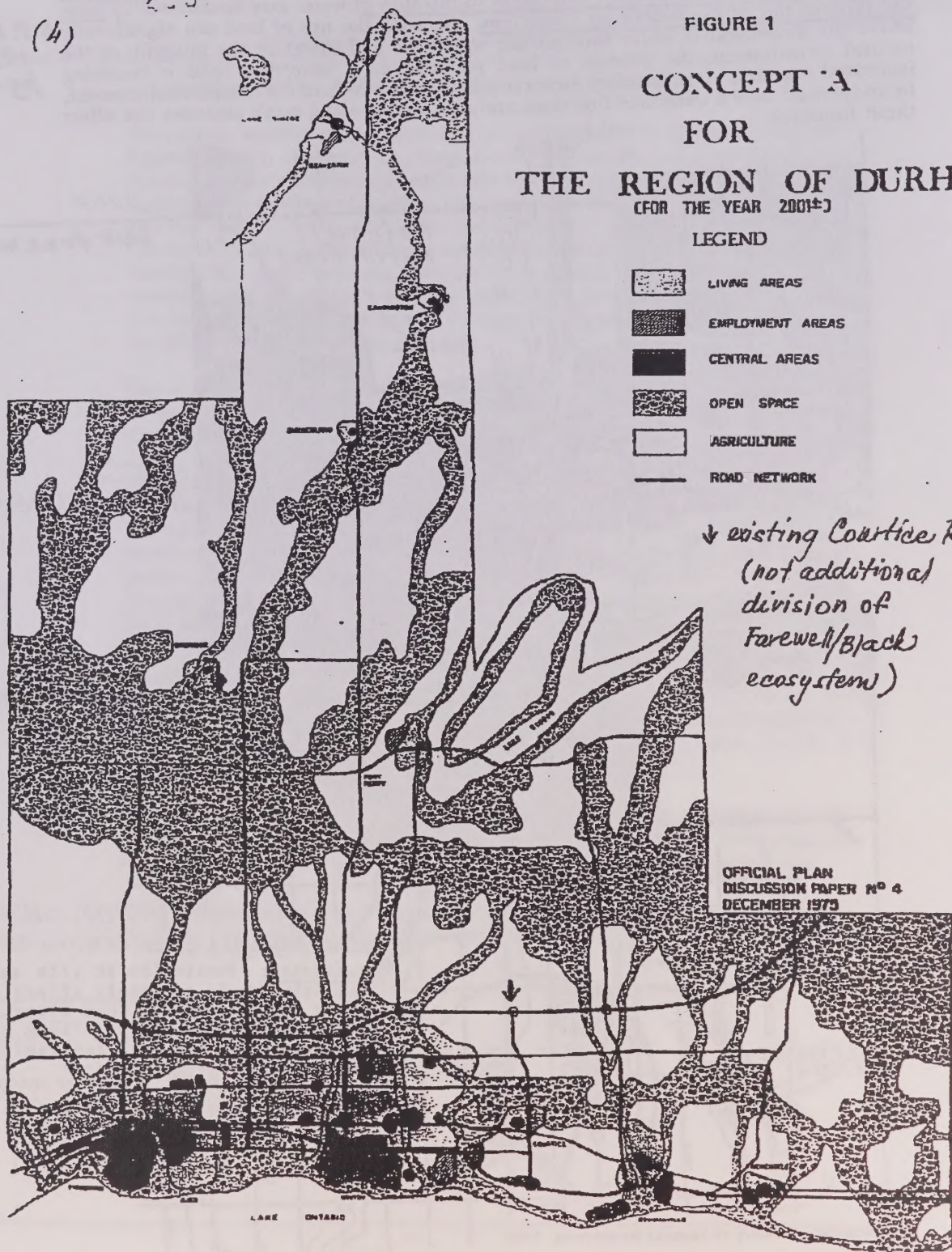
CONCEPT 'A' FOR THE REGION OF DURHAM (FOR THE YEAR 2001±)

LEGEND

-  LIVING AREAS
-  EMPLOYMENT AREAS
-  CENTRAL AREAS
-  OPEN SPACE
-  AGRICULTURE
-  ROAD NETWORK

↓ existing Courtice Rd.
(not additional
division of
Forewell/Black
ecosystem)

OFFICIAL PLAN
DISCUSSION PAPER NO 4
DECEMBER 1975



C. link - 182-202 M (in 1990\$); 400-404 = 4 936 Kf; 40-115 = 4 C. S. B.

This would say a lot of public transit (GO) is involved in this

(5) "Missing link" coming soon

In months, drivers in the Greater Toronto Area (GTA) can make an evolutionary turn onto Highway 407 — a multi-lane, all-electronic toll highway across the northern part of the GTA which has been called the "missing link" in the region's transportation system.

Highway 407 is one of the largest road construction projects in Canada's history, and it's breaking new ground in many ways. As Canada's first all-electronic toll highway, the ultra-modern route will feature a total of 127 bridges, 28 interchanges, 15 grade



separations, 13 water crossings and eight railway crossings. The new highway will be brilliantly illuminated by the latest in high-mast lighting, reducing the amount of light fixtures required while increasing lighting quality. It will also be

equipped with a state-of-the-art, electronic toll collection (ETC) system linked together by fibre optic communications technology.

Highway 407 will set a new Ontario benchmark for advanced road-building technology and expertise while safeguarding the surrounding environment.

Working for environmentally friendly transportation

Although the construction of a major highway alters the natural landscape, the Ontario Transportation Capital Corporation (OTCC) and Canadian Highways International Corporation (CHIC), the private sector partners building the highway, are committed to minimizing Highway 407's impact on the environment.

At locations where Highway 407 crosses rivers and streams, the aquatic and wildlife habitat have been protected, restored -- and in some cases, improved.

To ensure that the highway does not isolate the nearby

environment, the 407 team has maintained wildlife passages at many of the river and creek bridge crossings along the route.

Highway 407's design also provides for state-of-the-art storm water management facilities to minimize the impact that the quality and quantity of run-off can have on the neighbouring environment.

Throughout the highway's construction, CHIC has worked closely with neighbouring communities along the route — to manage existing heritage areas and the archaeological resources. Highway 407 is being built in accordance with standards on noise, erosion and sediment control.

Highway 407's builders are leaving as many trees in place as possible. Felled trees are milled for lumber, while others are recycled as "root wads," and used to repair stream beds. Branches, tops and other tree debris are chipped and used in the extensive landscaping being planned along the route, which ensures that the road fits in well with the surrounding scenery.

Replanting in the valley lands near stream crossings along the highway has been designed to promote species native to the area, to facilitate wildlife movement and to benefit fish habitat.

A massive undertaking...

At the end of 1995, 43% of the Highway 407 project was completed — work valued at over \$400 million. As of December, 1995, the project team moved a total of 9 million cubic metres of earth — the equivalent of 681,000 dump truck loads.

Since construction work began in May 1994, the 407 team has made rapid progress on completing large sections of the highway. During the 1995 construction season, CHIC laid a total of 2.5 million tonnes of granular road base, lay 325,000 tonnes of asphalt, and poured some 425,000 cubic metres of concrete. A total of 59 bridge decks and four high-level ramps have been completed so far, including 14 km of pavement concrete between Goreway Drive and Jane Street.

Stephen Leahy

Tel: (905) 655 - 4398 Fax: (905) 655 - 5888

Mail: Box 395 Brooklin, Ontario Canada L0B 1C0
 ~~~~~

Nigel Wood  
 Review Co-ordinator  
 Ministry of Environment and Energy  
 Environmental Assessment Branch

RECEIVED

June 30, 1997

RE: Environmental Assessment for the proposed Highway 407/Transitway  
 from Markham Road Easterly to Highway 7 east of Brock Road

Dear Mr. Wood,

I'd like to thank you for extending the public review period so that I, and others in my community could have a little additional time to consider the EA.

However, there is no doubt that the Ministry did not provide sufficient time for people to read, ask questions, discuss and formulate their views. What's even worse is the fact that only one copy of the EA was provided to my community of 60,000 people. And worse still, by placing it in Town Clerk's office where it could only be viewed Monday to Friday between 8:30 a.m. and 4:00 p.m., the Ministry made it inaccessible to anyone who has works during the day.

Your ministry also did not take into consideration that in the past few years a number of new residents have moved into the Town of Whitby and, Brooklin in particular, are unaware that Highway 407 East has been proposed.

Furthermore, given the numbers of people who have told me that they did not know about this EA, I have to conclude that your ministry's methods of informing citizens is extremely inadequate.

These facts clearly mean the requirements of the EA Act have not been met.

Accordingly, the 407 East EA process should be put on hold, the people of Durham Region made aware of the EA its process and scope, given an opportunity to get answers to questions and discuss the EA amongst their community members. This could be done in a timely and effective way with the assistance of area municipalities and citizen groups likely by the end of this year. I therefore request that the public be given until December 31st 1997 to respond to this stage of the 407 East EA process.

/2



-2-

Given the previously outlined limitations for comment on this review, my comments on the proposed highway 407 from Markham Road easterly to Highway 7 east of Brook Road.

## 1. Traffic Projections

The Traffic Demand Forecast model greatly overstates the future east-west travel demands because its projections are based in 1990-91 statistics. Since that time there has been a major recession and a great deal of change in travel patterns resulting from the following:

- \* Many thousands of workers both blue and white collar were laid off, mostly from large corporate employers. Some remain unemployed but where people have found jobs, they have either created their own, joined small local business, do part-time or contract work. All of these have greatly reduced east-west travel.

- \* The advent of the Internet and telecommuting has created an entirely new industry that runs on an electronic highway not a concrete one. People in this Region are already using the electronic highway for much of their previous travel and it will certainly account for a large volume by the year 2011.

- \* Employment levels in Durham have already changed as a result of the previously mentioned changes since 1991. The level has risen and will continue to rise.

These factors alone mean that the demand forecast presented in the EA is wrong and needs to be re-calculated on the basis of today's reality. Furthermore the forecast does not take into account the Taunton-Steeles expansion to four lanes or other road improvements.

The forecast also assumes that occupancy per vehicle, the level of transit and other modes of transport will remain the same for the next 25 years. That is highly unlikely given the escalating costs of private car ownership and a growing air pollution problem. t

The traffic demand forecast seriously overstates future travel demands and should be recalculated.

13

-3-

## 2. Alternative modes of Transportation

The EA does not properly assess alternative methods of transportation, namely:

### a.) Transit

The EA states that expansion of the GO Transit system would require major monetary investments but it does not offer any actual cost estimates nor does it acknowledge that building new light rail transit is at least five times cheaper per kilometre than the 407's estimated \$50-million per kilometre cost.

The EA also focuses on GO Transit only as a means of travelling into downtown Toronto and does not factor in other destinations it serves currently or could serve if the system were expanded in its travel demand forecast.

Finally, it does not appear that GO Transit were asked to calculate how they could meet future travel demands and what it would cost.

Other transit models are given little attention and dismissed without proper study as offering "limited opportunity" for handling projected traffic demands. Last fall the State of Florida announced a \$4 billion commitment to build light rail transit between urban centres, the San Francisco-San Jose BART system is expanding and Los Angeles is investing heavily in transit. These are but a few American examples where cheaper, more fuel-efficient and less environmentally damaging transit alternatives are being built instead of highways.

Municipal transit authorities, along with GO Transit appear not to have been given an opportunity to plan an integrated multi-modal transit system that could address short and long term traffic problems.

This is a serious omission.

### b.) Growth Management

The EA explicitly ignores the Region of Durham's own Official Plan and its projection that one out of every two residents will be employed locally by the year 2021. Instead the EA's traffic demand forecast uses the 1991 level of employment, a much lower level, and assumes it will remain the same for thirty years to 2021.

/4



- 4 -

By using the 1991 data, the EA ignores the fact the Region has experienced a dramatic increase in self-employment in the past three to four years. And this is likely to continue to do so as previously mentioned, particularly as Durham's economy moves into "the information age".

The EA's assumption that employment levels in the Region would remain unchanged for thirty years completely ignores the Region's own projections and dramatically overstates the amount of traffic it forecasts. This appears to be a significant bias on the part of the Ministry.

It is also well understand that Growth Management is a key in reducing urban sprawl and transboundary travel. And, as stated in the Golden Report on the Greater Toronto Area, it could save \$10 - 16 billion in capital expenditures alone in the next 25 years. Growth Management is not only a solution to meet travel demands it offers an enormous opportunity to save money -- why wasn't this examined in the EA. Why aren't the full cost benefits of the 407 versus a Growth Management scenario compared?

I'd particularly like to see the factual basis for the "economic growth" that the 407 is supposed to bring as stated in the EA. How precisely would it generate this "economic growth" and how, qualitatively and quantitatively would that differ from other transportation alternatives?

#### c.) Transportation Demand Management

The options the EA considers here are limited to telecommuting, trip sharing and High Occupancy Vehicle lanes and does not consider what impact these will have or could have in reducing traffic demands.

The successful reductions in traffic volumes achieved by many other communities world-wide using High Occupancy Vehicle (HOV) lanes are not properly assessed in the EA. That Durham Region has the lowest people per vehicle ratio in the Greater Toronto Area at 1.18 means there's plenty of room to up. To date no effort has been made by the Ministry of Transportation to increase this ratio. The EA traffic demand forecast assumes that the Ministry will not make any efforts in this regard and the ratio will remain roughly the same up to the year 2021.

15

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The Ministry would be negligent for many reasons should an effort not be made. And by the way HOVs do work. For example: Operators of toll highway in the San Joaquin Hills outside of Los Angeles complained recently that traffic on their new highway is less than half what they projected. Why? Because people preferred to use the new HOV lanes added to a public highway. (Los Angeles Times May 1, 1997)

These practical and low-cost alternatives are incorrectly dismissed in the EA as "not practical" in solving the short term traffic problems. Clearly that assertion reflects the EA's incomplete study of the HOV and trip sharing alternatives which are fundamentally more efficient, and could be implemented both quickly and at very low costs.

Telecommuting, for example, has grown dramatically since 1991, will continue to do so in the future -- the impact this will have on traffic demands in the Region is not assessed in the EA.

Nor is teleconferencing considered.

Nor is doing business via the Internet considered. Some \$10-12 billion dollars of business transactions are expected this year alone. Future projections are in the trillions of dollars.

Nor is van-pool or ride-share or car-sharing considered in this EA. In Vancouver one company alone started with one van to take commuters into the city and, in few short years, had nearly 100 in operation. In France and other European countries, neighbours share ownership of vehicles. In California there was a recent announcement about a transportation alternative involving public bikes that anyone could use.

Finally, the EA's conclusion that a combination of these and alternative measures would make a five to 10 per cent reduction in traffic demands by the year 2011 is completely unproven. Nor does the EA properly assess or quantify the potential impacts of these alternatives.

For instance should Durham fall short of its local employment rate of .5 and achieve only .45, that would reduce traffic demand by at least 20 per cent. And should the Ministry of Transport do a little promotion of trip-sharing or failing that, higher gasoline prices, and the person per car ratio increase to 1.32, that would be another 10 per cent reduction in traffic. Those two measures alone would account for a 30 per cent traffic reduction with little or no cost.



- 6 -

Since at least 1990 there has been a general realization that alternative transportation modes to the personal automobile were necessary for a healthy and sustainable future. A great deal of research and pilot projects have been done and there are now many examples of successful alternatives in place all over the world. Environment Canada, Health Canada and legions of other government and non-governmental groups are now backing alternatives. To dismiss these as inconsequential in terms of their impact on travel demand is outrageous and completely unsubstantiated in the EA.

And to state that alternatives are "not a short term solution" is completely without basis. An HOV lane on the 401 could be in place before the end of the year. A Van Pool could be in place by this fall. Additional Go Train service with reduced rates could be in place before the end of summer. And so on.

It is irresponsible to continue with this EA without a full and proper consideration of alternatives -- particularly a combination of alternatives -- as a way of addressing future and realistic (as addressed previously) travel demands.

#### 4. Safety

There is no analysis of the human and financial cost of traffic accidents for any of the stated transportation alternatives nor the highway 407 itself. A 1990 Ministry of Transport study concluded that the total cost of road accidents in the province amounted to \$9 billion for that one year alone. Transit and other alternatives have proven themselves much safer, and will not create the financial or societal burden highway 407 will.

That the EA does not examine this is yet another serious omission.

#### 5. Air Pollution

While the EA acknowledges that there will be a negative impact on the air quality in Durham Region, it does not examine how this reduced air quality will impact on the health of residents nor does it take into account the increased health costs and loss of productivity this will impose on area municipalities and the province. A health study in the United Kingdom last year found that the closer a child lived to a multi-lane roadway the greater the chances of asthma and other lung disfunction.

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There is a mountain of evidence about the environmental hazards and health problems associated with car and truck traffic. Some 1800 people die each year in Ontario die as a result of air pollution -- and cars and trucks are the major contributor. And the evidence grows ever stronger and more ominous for the residents of Durham and for the financial burden on our embattled health care system. Why are these costs not included in the EA?

We know air pollution is directly proportional to the number of vehicles on the road. Vehicles stuck in traffic do create marginal worse pollution, so congestion makes things worse. But clearly the solution is not building more roads so that more vehicles can be accommodated. If it is then where is the analysis that proves it?

The health impact and costs of non-polluting or lesser polluting transportation alternatives as compared to the highway 407 are not examined in this EA at all. This is a major omission.

#### 6. Noise

While the EA acknowledges that noise levels will exceed 55 decibels it does not examine the how this will impact the health and the quality of life of residents.

#### 7. Loss of food production

The EA does not take into the value of the current and future food production that will be lost in the 381.5 ha of Class 1 and 2 farmland that it proposes to use. This is a significant cost and will affect food prices for the citizens of Durham Region and elsewhere. Why has this impact not been considered?

#### 8. Wildlife

Dozens of wildlife corridors run north and south, crossing the proposed route of the 407 East. The EA states that mitigation measures will minimize the highway's impact, but does not explain what these measures are nor how they will work.

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There are many other issues I could address had I additional time to study the EA and respond. But let me conclude by offering yet another recent example of how the rest of the world knows that new highways is the wrong way to solve transportation problems:

The British Transport ministry recently announced the launching of a major campaign to get commuters to switch from their cars to cycling, walking or public transport. Working with the corporate and citizen groups they are "developing strategies aimed at reducing journeys to work."

"If we care about our environment and our quality of life then we need to change our current travel patterns." Gavin Strang, British Minister of Transport. (Financial Times June 5, 1997)

I look forward to receiving your response.

Sheehy

RECEIVED

Lois James  
2270 Meadowvale Road  
Scarborough, Ont.  
M1X 1R3

Mr. Nigel Wood, Review Coordinator  
Highway 407 East Extension E.A.  
Ministry of Environment and Energy

By FAX #40-3771

Dear Mr. Wood and EA Review Panel:

During the past year I have been working with a group of volunteer citizens from communities along the route of the proposed Highway 407. Daily, additional evidence mounts dramatizing the scope of the negative impact that this ill-conceived mega-project is bringing, and will bring, if it is extended easterly, to the entire GTA. It involves the entire social and economic structure as well as environmental health of every community within several miles of the Route. Therefore, it is quite daunting to know where to begin to summarize concerns.

The Environment Assessment documents mention a number of expected impacts but never offer any creative solutions or seriously address alternatives. Since the EA is inadequate, the minimum request would be a full hearing into all impacts and detailed study of alternatives. This would be a learning experience for staff and the concerned public. (So far elected representatives have not been tested on their understanding. We must assume they would be attentive and benefit from the process.)

Meanwhile, considerable provincial attention is needed immediately on controlling urban sprawl pressure on greenfields. The people in existing hamlets and low density urban communities with whom our 407 Action Group has been meeting are totally abandoned to the fallout of ongoing poor planning, sprawling suburban development with no requirement for transit facilities. How are we serving the children, the youth, the seniors, the poor who cannot afford cars? These communities will be better served by public transit and affordable housing within the existing boundaries. All our resources must be put toward sustainable transportation for these existing communities. All future development must require developers to provide the transit access, not more roads. We must stop subsidizing roads and car-based commuting and the resulting pollution.

Since taxpayers must get some value for the first \$billion plus borrowed for the section of 407 between 410 and 404 Highways, may we have full cost accounting of the first year's operation and good testing of the transponders. The Auditor requested the first and the second will help us make all 400 provincial highways fully self-financing toll roads. Let us get out of road debt. The contracted section of 407 beyond 404 should taper down to park and ride, and the transitway begun now. This is desperately needed, not more pavement.

Sincerely,

*Lois James*



RECEIVED

Nigel Wood  
EA Branch, Ministry of Environment and Energy  
Fax: 440-3771

**Re: Highway 407 EA - Proposed Extension East of Hwy 48**

Dear Mr. Wood:

We have a number of concerns about the proposed extension of Highway 407 and its potential for adverse economic, ecological and social effects. The attached questions relate to some of these concerns. We would appreciate a complete response to our questions.

We look forward to a thorough government review of the Highway 407 EA and we request a copy of the Review when it is released.

Sincerely,

Jim Robb  
1 Braeburn Blvd  
Scarborough, Ontario  
M1J 2P9

Kevin O'Connor  
6 Plover Road  
Scarborough, Ontario  
M1G 3C9

### Questions Re: highway 407 EA - Extension East of 48

1. Has the widening of highway 401 improved the east west movement of traffic through Toronto and what is the average daily 401 traffic flow for each of the last ten years at Brock Road, at Markham Road and at McCowan Road?
2. What is the expected level of service for each section of highway 401 from Brock Road to highway 404, after the highway 401 improvements are complete?
3. The completion of the highway 401 widening will provide a no-cost alternative to highway 407, particularly during non-peak hours. Has the EA considered the effect of the highway 401 widening on the timing of, and need for, the highway 407 extension and the economic viability of highway 407 as a pay-for-use toll road?
4. How is the MOT practicing traffic demand management to reduce the problems caused by long-distance urban commuting and does the MOT have any plans to extend the highway 407 tolling system to highway 401 or the hwy 401 core lanes?
5. Does the EA's prediction of future traffic demand contain a careful assessment of the traffic-demand patterns for the 21<sup>st</sup> century and the growing importance of tele-commuting, flexible hours, home offices and pollution reduction objectives (e.g. Agenda 21 CO<sub>2</sub> Reduction Agreement)?
6. Will any decision on the further extension of highway 407 await an assessment of the financial viability of the first phase?
7. What legal and financial provisions are in place to ensure that the Ontario taxpayer does not get stuck with the bill if the 407 toll highway fails to pay for itself?
8. Why is the MOT spending scarce resources on the further extension of highway 407 in an area with other planning and transportation options when they do not have the funding to maintain existing highways in areas of the province which have fewer transportation options?
9. What are the development agreements or plans for the provincial lands (e.g. Cornell) which will affect, or be affected by, the decision on the extension of highway 407?



10. How does the highway 407 EA respond to urban planners who say that highway 407 will subsidize the type of urban sprawl which consumes valuable farmland and greenspace and generates higher taxes by creating unsustainable suburban infrastructure growth and escalating service and infrastructure maintenance costs?
11. How does the highway 407 EA respond to the concern that highway 407 will subsidize long-distance commuting to work, increasing traffic congestion and smog in Toronto and increasing respiratory health care costs?
12. How does the highway 407 EA respond to the issue of urban decay which arises when a large number of long-distance commuters consume the services of a city (Toronto) without contributing to the financing of these services through property taxes?
13. What mitigation measures are being taken to ensure the extension of highway 407 does not promote urban sprawl and the kinds of infrastructure which are unsustainable?
14. Will a significant portion of any tolls for the extension of highway 407 be dedicated to improved public transit throughout the GTA?
15. What mitigation/compensatory measures are proposed to buffer greenhouse gas emissions and pollution (e.g. funding of a trust fund and additional provincial lands for reforestation as Rouge park greenspace)?
16. What is the estimated cost of the highway 407 extension for the following categories: planning and approvals; total design and construction; bridging over the Rouge River Valley; bridging over the Little Rouge River Valley; bridging over other streams and rivers; bridging over roads; and interchanges with roads?
17. What are the estimated annual maintenance and infrastructure renewal costs for the Highway 407 extension between highway 48 and Brock Road?
18. Will highway 407 increase surface water discharge to the Rouge River, the Little Rouge River, other Rouge tributaries, or other streams and if so by what volume to each stream?
19. At capacity, and over the length of the extension, what is the highway traffic's total estimated annual loadings (kg) for carbon-dioxide, carbon-monoxide, sulfur dioxide, NO<sub>x</sub>, ground level ozone, heavy metals, and particles less than 10 microns (PM<sub>10</sub>).

20. What are the highway's estimated salt and metal loadings (kg) to surface and groundwater within the Rouge River watershed?
21. Instead of culverts, will the highway 407 extension have regularly spaced underpasses (e.g. every 500 metres or less) to ensure the highway does not sever pedestrian, bicycle, equestrian, stream and wildlife corridors? If not, could this design deficiency raise issues of "due diligence" and associated economic consequences regarding the failure to take adequate steps to avoid deadly traffic/people/wildlife conflicts?





# FRIENDS OF SECOND MARSH

206 King Street East, P.O. Box 26066 RPO King Street, Oshawa, Ontario L1H 8R4

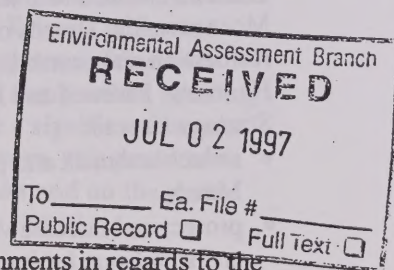
*"Preserve Our Wetlands"*

June 20, 1997

Nigel Wood, Review Coordinator  
Ministry of Environment and Energy  
Environmental Assessment Branch  
250 Davisville Ave., 5<sup>th</sup> Floor  
Toronto, Ontario M4S 1H3

RE: Comments on the Highway 407 / Transitway E.A.

Dear Mr. Wood;



I am writing on behalf of Friends of Second Marsh to provide comments in regards to the proposed expansion of Highway #407 and the possibility of an Freeway Link in the City of Oshawa and Municipality of Clarington.

As a non-profit community group that is coordinating the preservation and restoration of Oshawa Second Marsh, we are concerned about the impacts that the proposed highway network could have on the watershed ecosystem which Second Marsh is part of and critically dependent upon.

## Background

Friends of Second Marsh and its predecessor, the Second Marsh Defense Association, have been involved in efforts to protect and restore Oshawa Second Marsh for over 25 years. As one of the few remaining warm-water coastal marshes in Ontario, this Provincially Significant Wetland and Area of Natural and Scientific Interest has played an integral role in the development of the Region's political, economic, cultural and ecological identity, not to mention the personal influence it has had on the multitude of citizens who, since before European settlers even arrived, have depended upon, researched and simply enjoyed the benefits that Second Marsh provides.

Aside from the cultural influence Second Marsh has had on the community and despite decades of intensive study, its true ecological value may never be truly understood. What we do know, however, is that Second Marsh currently provides habitat to over 361 plant species, 265 bird species and an array of mammals, amphibians, reptiles and fish. In the spring and fall, Second Marsh provides a critical source of food and habitat for migratory birds preparing for or resting after their long journey across the lake and, as the first or

last piece of land seen for some time, healthy coastal marshes such as Second Marsh can mean the difference between life or death for migratory bird species.

In the past six years, over 2.3 million dollars have been spent on activities to restore the overall ecosystem health of Second Marsh. While the majority of funding has come from Environment Canada, the City of Oshawa and the Ministry of Natural Resources, the in-kind and volunteer contributions from our partners and an extensive network of community volunteers is immeasurable. These partners have contributed to efforts which are helping to protect sensitive areas, re-establish wildlife communities, increase aquatic vegetation and reduce the impact of sediment and pollutants which enter the marsh from upstream sources.

### **Oshawa Second Marsh Watershed**

More recently, Friends of Second Marsh and their partners have broadened their scope of restoration and protection to include the watershed of Second Marsh, formed by the Harmony, Farewell and Black Creek sub-watersheds. The Second Marsh Stewardship Strategy aims to:

- reduce sediment and pollutant input into the watershed and ultimately into Second Marsh,
- protect and increase vegetative corridor connections along and between stream valleys and significant habitat areas,
- preserve and improve water quality to maintain fish populations and protect wildlife and human health, and
- raise awareness of the connections between human activities in the watershed and the health of the Second Marsh ecosystem.

It is anticipated that over the next three years, the Stewardship Project will direct an additional \$0.5 million dollars into community-based watershed restoration efforts.

### **Issues of Concern Regarding Freeway Development**

#### **1. Sedimentation**

The health of the Second Marsh ecosystem is intricately linked to water, sunlight and temperature levels. Each of these factors can be greatly influenced by the rate of sediment being deposited into the Marsh from upstream sources. Friends of Second Marsh have become increasingly more involved in efforts to identify and control upstream sources of sediment through the Watershed Stewardship Project. **Friends of Second Marsh are concerned with the serious impacts that the development of Highway #407 and a possible Freeway Link could have on increasing sediment levels in the watershed and the Marsh.**

#### **2. Corridor Linkages**

In addition to Second Marsh itself, the Watershed ecosystem boasts a Provincially Significant Wetland Complex, a Regionally Significant Bog, several Environmentally Significant Areas and significant cold-water fish habitat. Previous studies have indicated



that within the Lake Iroquois shoreline physiographic region, the valleys of Black Creek and Farewell Creek represent the largest continually vegetated unit of the Freeway Link Study Area.<sup>1</sup> **Friends of Second Marsh are concerned that if Highway #407 and the Freeway Link to Highway #401 are constructed through Oshawa and Clarington, the highways will bisect and segregate natural habitat areas, reducing the potential for corridor movement by fish, wildlife and plants. Of particular concern is the vegetated area bounded by Courtice Rd., Solina Rd., Nash Rd. and Concession 6 in the Municipality of Clarington.**

### **3. Groundwater Recharge**

The wetlands located within the Black/Farewell valley lands are understood to be formed by groundwater that is discharged through the soil from the south slopes of the Oak Ridges Moraine by an upward hydraulic gradient. These wetlands are also understood to provide the majority of base flows to Black and Farewell Creeks. **Friends of Second Marsh are concerned that any alteration to the groundwater system within and surrounding the Black/Farewell wetland complex, such as soil compaction, grading, paving and de-watering for highway construction, could have a significant impact on natural base flows to the creeks and to Second Marsh. In turn, this could have negative impacts on the viability of cold-water fish in the creeks and on the water levels of Second Marsh, to which aquatic habitat is intricately linked.**

### **4. Natural areas/habitat and wetlands**

Environmental inventories conducted since the early 1970's have indicated that two rare breeding birds, the Red-shouldered Hawk and Henslow's sparrow, have been sighted in the watershed. Mature maple-beech-hemlock forests which are found in the Black/Farewell watershed but which are found to be underrepresented in other surrounding areas are used for nesting by the Red-shouldered Hawk. **We are concerned that the areas which encompass and surround the route of the proposed freeway link have not been thoroughly inventoried and that the true importance of the area as habitat for these and other vulnerable, threatened or endangered species may not yet be completely understood. We are further concerned with the impact that increased noise, air and light pollution may have on this critical habitat area.**

### **5. Water quality and fisheries**

Black Creek is one of the few remaining creeks in the Greater Toronto Area which still supports a resident cold-water fishery. In addition, Black and Farewell Creeks also support healthy populations of migratory cold-water fish species. This is due in part to minimal development within the watershed and the role of the Iroquois Plain wetlands in filtering sediment from up-stream agricultural areas. **With the potential for the development of Highway #407 and the Clarington Freeway link, Friends of Second Marsh are concerned that the construction process and resulting alterations to the**

<sup>1</sup> Oshawa / Newcastle Freeway Link - Highway 401 to Proposed Highway 407. Route Planning and Environmental Assessment Study. Technical Report, July 24, 1991. Ontario Ministry of Transportation.

creeks and wetland areas for overpasses and stormwater management could result in increased sediment, heavy metal, chloride and other toxic contaminant concentrations. In addition, the necessary clearing of vegetation could limit the amount of vegetative food sources available and could cause stream temperatures to increase with the loss of overstory shade. These conditions would have obvious impacts on the habitat and viability of fish and the aquatic invertebrates upon which many species feed.

## **6. Costs**

Friends of Second Marsh is one of many stakeholders who have been working to preserve and improve water quality, fish and wildlife habitat and corridors and human health and well-being in the Second Marsh Watershed and surrounding areas. It is almost impossible to place a value on the professional and personal contributions that have been made in that regard. As a result, the Second Marsh Project serves as a role model for government agencies and other grass-roots organizations who embark on "long-shot" conservation goals. **Friends of Second Marsh is concerned with how the highway development might work to reverse the years of dedication and commitment, not only of our numerous partners but of the many others who view this project as a model for hope, if the impacts are found to cause adverse effects to Second Marsh. In addition, millions of tax and charitable dollars have been invested over the years which should not be overlooked.**

With these issues in mind, Friends of Second Marsh would like to pose the following questions:

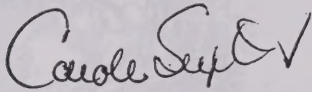
1. How have environmental issues such as groundwater, stormwater management, creek crossings, fish and wildlife habitat protection and native plantings been addressed during the construction of Highway #407 to date? What have been the successes and failures? How have they been evaluated and what measures have and will be taken to correct any faults with respect to these issues?
2. What proportion of the overall budget for highway construction has been and will be allocated to environmental studies, protection and improvement measures?
3. What is the current timeline for Highway #407 expansion and Freeway link development.

Friends of Second Marsh requests the opportunity to participate in the future planning process for Highway #407 and the proposed Freeway Links. Given our experience in environmental conservation on a watershed basis, and our long-standing and highly regarded role as stewards of this Provincially Significant Wetland, we feel that we could provide important input into environmental plans and considerations.



We look forward to hearing from you on these points of consideration. In the mean time, we wish to thank you for the opportunity to provide comments with respect to the proposed Highway #407 extension.

Sincerely,

A handwritten signature in cursive script, reading "Carole Seysmith", followed by a checkmark.

Carole Seysmith  
Second Marsh Stewardship Coordinator

# FRIENDS OF SECOND MARSH

Saturday, June 7, 1997

## PARTNERS & VOLUNTEERS RECOGNITION DAY

### Welcome Friends,

to the Friends of Second Marsh Partners & Volunteers Recognition Day, a gathering to say "thank you" for providing us with the true meaning of partnership.

Performance  
Assistance  
Resources  
Time  
Need  
Energy  
Respect  
Support  
Helping Hands  
Interest  
Partners

Without you, partnership and volunteering would mean nothing.

### Thanks

to our Corporate Sponsors for their generous contributions for this event.

Environment Canada  
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## HONORARY LIFE MEMBERSHIP

For outstanding service to Friends of Second Marsh

Patricia Lane

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In recognition of an effective commitment to Oshawa Second Marsh

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NAFEC - North American Fund for Environmental Cooperation  
Ontario Federation of Anglers and Hunters  
Ontario Federation of Anglers and Hunters - Zone E  
Ontario Byline - Drillington  
Nancy Patterson  
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## CERTIFICATE OF APPRECIATION

In recognition of a significant contribution to the Oshawa Second Marsh or Friends of Second Marsh

Consumers Gas  
Darlington Provincial Park  
Dr. F.J. Desjardis College  
Durham Board of Education  
Durham Region Roman Catholic Separate School Board  
Eastview Boys and Girls Club (per Derek McNulty)  
EOS Canada (per Gord Allen)  
Evergreen Foundation  
Federation of Ontario Cottagers Association  
Harmway Creek Golf Centre  
Municipality of Clarington  
Northumberland-Clarington Board of Education  
O'Neill Collegiate Interest Club  
O'Neill Collegiate Coop Program  
Sindell Secondary School  
University of Toronto, Scarborough College  
White Rose Crafts & Nursery Sales Limited  
13<sup>th</sup> Oshawa Scouts  
32<sup>nd</sup> Oshawa Scouts and Cubs  
5<sup>th</sup> Pickering Scouts (per J. Warren)  
537 Scarborough Breweries (per J. Warren)  
Jeff Anderson  
Dr. Margaret Bain  
Tom Burrie  
Suzanne Barrett  
Dr. Dawn Bazzly  
Don Blight  
Tammara Boughen  
Eugene Brasher  
Dave Bryan  
Chris Cault  
Jim Cook  
Lori Deyo  
Dave Dixon  
Keith Discipline  
Scott Dobbie  
Dore Dunlap  
Lesley Dunn  
Lloyd Fessenden  
Ryan Gohm  
Gord Giesberger  
Mike Glesien  
Brad Greenlee  
Kim Guas  
Sandra Hanson  
Andy Hagen  
Kathy Helb  
Brian Henshaw  
Gina Hooper  
Neil Hutchinsan  
Leigh Anne Inack  
Ken Jones  
Brian Joyce

## CERTIFICATE OF APPRECIATION

In recognition of a significant con. to the Oshawa Second Marsh or Friends of Second Marsh

Stephen Kaslinger  
Larry Kirby  
Dave Lawson  
Jean Labrecque  
Dale Leadbeater  
Patrick Lee  
Mark Lane  
Robert Latzky  
Brenda MacNaughton  
Ron Maher  
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Alden McCoskey  
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Brian Nicholson  
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Patty Orrechio  
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Peter Pilon  
Glen Pilon  
Kristina Pette  
Mark Peacock  
Netter Picheweth  
Russ Powell  
Glen Price  
Rayfield Pye  
Libby Racansky  
Jenny Reynolds  
Ken Ridge  
Paul Ristow  
Blair Saranchuk  
Brad Savage  
Brian Smith  
Loth Soben  
Paul Somerville  
Jodie Sophia  
Owen Steel  
Donna Stewart  
Chad Strong  
Rick Symmes  
Janice Swartz  
Doana Taylor  
Greg Taylor  
Tasile Thompson  
Rodger Todhunter  
Mike Vatcher  
Jeff Warren  
John White  
Stan Wilkins  
Lacy Wisnik  
Dr. Tom Whill  
Amber Wils  
Peggy Wilk  
Joe Worman  
Don Wright  
Sharon Young



RECEIVED

Nigel Wood  
Review Co-ordinator  
Ministry of Environment and Energy  
Environmental Assessment Branch

June 6, 1997

RE: Public Comments regarding the Environmental Assessment for the  
proposed Highway 407/Transitway from Markham Road Easterly to Highway 7  
east of Brock Road

Dear Mr. Wood,

Enclosed please find a comment sheet that I and a number of my  
neighbours have signed. I did not have much time to do this but nearly  
everyone I talked to about the 407 felt that we don't have enough  
information about the project and more time is needed to find out  
what's going on.

Please phone me at 905-655-8731 if you have any questions about this  
submission.

Andy Barrington  
25 Ferguson Avenue  
Brooklin, Ontario  
LOB 1C0



## COMMENTS ON THE ENVIRONMENTAL ASSESSMENT OF 407 EAST

We, the undersigned residents of the Town of Whitby, have the following concerns regarding the Environmental Assessment (EA) for the proposed Highway 407/Transitway from Markham Road Easterly to Highway 7 east of Brock Road:

## 1. Limited Public Access

The fact that the EA was not available to the residents of Whitby until after April 16, 1997, that only one copy was available which could only be viewed Monday to Friday between 8:30 a.m. and 4:00 p.m. in the Town Clerk's offices, and that public comments are only accepted up to June 6 1997, clearly did not allow enough time for residents to become aware of, read, obtain additional information, ask questions or comment on the EA.

## 2. New Residents

The fact that in the past few years a number of new residents have moved into the Town of Whitby and, Brooklin in particular, are unaware that Highway 407 East has been proposed.

Given the short time frame for residents to comment, the limited access and complexity of the documentation, we request that the comment period on this EA be extended until December 31, 1997.

Name Greg Bourdon  
 Address 35 Ferguson Ave. Brooklin Ont.  
 Signature [Signature]

Name GERALD E. ANDREWS  
 Address 39 FERGUSON AVE BROOKLIN ONT.  
 Signature Gerald E. Andrews

Name MAKYE BOURDON  
 Address 35 Ferguson Ave Brooklin Ont  
 Signature Maye Bourdon.

Signature W. J. Soudan.

COMMENTS ON THE ENVIRONMENTAL ASSESSMENT OF 407 EAST

Name Kim Cates

Address 43 Ferguson

Signature [Signature]

Name DIAN CATES

Address 43 FERGUSON

Signature [Signature]

Name SIM GREGG

Address 49 FERGUSON AVE BROOKLIN ONT

Signature [Signature]

Name ERWIN WINKLER & SUE WINKLER

Address 54 FERGUSON AVE. BROOKLIN, ONT

Signature [Signature]

Name Wm. H. Warrace

Address 50 Ferguson Ave BROOKLIN, ONT.

Signature [Signature]

Name [Signature]

Address 42 Ferguson Ave. Brooklin Ont

Signature [Signature]

Name Paul Frenco Cunto

Address 30 Ferguson ave Brooklin Ont.

Signature Paul Frenco Cunto.

Name KEN O'BLINES



Signature Paul Gerald Lento  
Name KEN O'BLINES  
Address 26 FERGUSON AVE BROOKLIN ONT  
Signature Ken O'Blines

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Name Anne-Marie Siddle  
Address Box 67, 55 Queen St., Brooklin, Ont. L0B1C0  
Signature Anne-Marie Siddle  
Name Kelly Paracsi  
Address 65 Bagot St. Brooklin Ont L0B1C0  
Signature Kelly Paracsi  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Signature \_\_\_\_\_



## COMMENTS ON THE ENVIRONMENTAL ASSESSMENT OF 407 EAST

Name R. Cartwright

Address 23 Ferguson Ave

Signature [Signature]

Name West.

Address 24 Queen St.

Signature Joe West.

Name [Signature] (Eamonn O'Neill)

Address 21 Queen St.

Signature [Signature]

Name Sheila Hendry

Address 156 Baldwin St. Brooklyn LORICO

Signature \_\_\_\_\_

Name ANDY BARRINGTON

Address 25 FERGUSON AVE, BROOKLIN

Signature Andy B.A.

Name HELEN BARRINGTON

Address 25 FERGUSON AVE, BROOKLIN

Signature Helen Barrington

Name Tim Maxwell

Address 29 Ferguson Ave

Signature Tim Maxwell

Name GATTI VOGEL

Address 60 Columbus Road East, Columbus, Ont.

Signature [Signature]

## *Marjorie Lamb*

96 Highland Avenue, Toronto, Ontario M4W 2A6

Fax: (416) 324-9342 Phone: (416) 924-2001

Cellular: (416) 399-5111 Email: mlamb@web.net

June 4, 1997

Mr. Nigel Wood, Review Coordinator

Highway 407 Environmental Assessment By FAX: One page only Fax # 440-3771

Dear Mr. Wood:

I am writing to express my opposition to any further construction of Highway 407. The reasons for my opposition are numerous, but I will try to state a few of them briefly.

1. Environmental damage: Thousands of acres of food-producing farmland have already been destroyed by the urban sprawl of Metro Toronto. Highway 407 is already well on its way to becoming an even greater destroyer of land. Ecosystems are disrupted when vast stretches of pavement criss-cross the earth. Rivers, lakes, streams, and ground water become receptacles for pollutants from automobile fumes, salt, rubber, oil, gasoline, and spills of every kind of hazardous material known to humankind.

The greenhouse gases produced by vehicular traffic have already been cited as being one of the chief contributors to global climate change. This climate change is no longer theoretical. Scientists the world over agree that greenhouse gases, and particularly carbon dioxide, are already causing havoc with sea levels, deciduous forests and rainforests, agricultural crops, island ecologies, coastline habitations, flooding, storms, and weather patterns. Canada has already reneged on its commitment to stabilize CO<sub>2</sub> emissions at 1990 levels. Building more superhighways ensures that we will continue to increase our CO<sub>2</sub> emissions.

2. Human health: Smog is increasingly cited as a human health concern. Reliable estimates suggest that well over 300 people die each year in Canada, mostly in large urban areas such as Toronto, as a direct result of smog, which of course, is a direct result of vehicular traffic.

3. Non-sustainability of the automotive lifestyle: Why are we continuing to use outdated solutions for 1997 problems? Most planners now agree that the suburbs were a huge design mistake. Superhighways are part of that same ideology that thinks we need cars, and lots of them, each carrying a single person across vast stretches of land. We should be looking to sustainable solutions such as subsidies for mass transit, cycling and other non-polluting forms of transportation.

4. Economic folly: We, the taxpayers, will shoulder the burden of Highway 407 for years to come. This is a highway which is not needed – indeed, there are several highways running parallel to 407 which already serve more traffic than we want. Building even more highways will only ensure more vehicles moving through the Greater Toronto Area. We, the people, do not want any more vehicles.

Yours truly,  
Marjorie Lamb



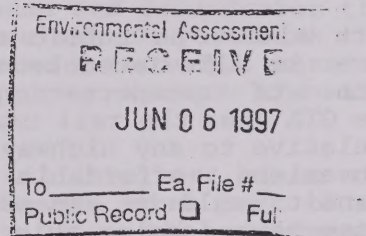
P.O. Box 399  
Orono, Ont. L0B 1M0

Tel: (905) 983-5249  
Fax: (905) 983-6416

VIA COURIER

June 4, 1997.

HIGHWAY 407/TRANSITWAY EA  
Mr. Nigel Wood, Review Coordinator  
Ministry of Environment and Energy  
Environmental Assessment Branch  
250 Davisville Ave. 5th Floor  
Toronto, Ontario M4S 1H2



Dear Sirs:

When viewing the document at the Clarington Town Hall, a friend noted on the "Breakdown of Comment Sheet Origin" that there were no comments from individuals in Clarington, the former Town of Newcastle. I find this particularly disturbing because my husband and I made written comments at several of the public meetings held in the area, such as Tyrone and I made several comments when you held meetings in Pickering at the Kahn Auction Barns last fall (1996). At the latter meeting, I had spoken with Denise Morneau, whom I had visited at the MTO offices in August 1995 expressing a variety of concerns. Has the MTO and/or their consultants managed to lose all of the comments? If they have lost records of my comments, what about those of others?

I wish to make several broad comments hereunder, and trust that somehow these too will not be misplaced, and therefore, disregarded.

My husband and I are affected property owners. The proposed technically preferred route will pass through our property which is approximately 3 kilometers west of Highway 115/35. We operate a cow/calf beef operation on 275 acres. The proposed route will affect pasture and crop lands, forested land and a stream running through our property.

Quite frankly, we cannot see the need for the 407 for very many reasons. The 407's stated aim is to serve as a northern by-pass for Toronto, and it was hoped that some truck traffic would be diverted off the 401. The trucking industry has publicly stated that they will not use the 407 because of high tolls and because many of their drop-off points are off the 401. Why would individuals, who have many free alternative routes, use the 407?

The advent of the 407 is already opening up development north and east of Toronto. The end result will surely be that as development moves further north, the 407 too will eventually become congested, assuming that it is being used at all, and then you will need yet



another by-pass. Even the MTO must know that highways do not solve traffic congestion problems. What they do, however, is make everyone dependent on the car because there are few alternatives to highways. This, of course, makes the aggregates industry, property developers and speculators, the car manufacturers and the oil and gas producers very happy.

With almost no public transit outside Toronto, congestion will never be alleviated because to get anywhere, the car is the sole method of transportation. This is a particular shame because in the GTA area the rail tracks are already in place. For relatively (relative to any highway) little investment, efficient, reliable, convenient, affordable and environmentally-friendly GO public transit could be expanded to service the GTA communities, with those beyond being able to hook-up to this GO service. How many more cars were back on the road after the ill-conceived GO service cuts of two years ago, all to save a paltry ten million dollars? A classic case of penny-wise and pound foolish.

With no public transit, everybody in the family needs their own car unless they are all going in the same general direction at the same time. All the dollars that are being invested in vehicles are not being spent on other things, such as education, cultural pursuits and other leisure time activities. What about those not of driving age? They are simply stuck and in small towns, you will find these kids hanging around the local convenience stores with nothing to do but get into trouble.

What about seniors? By not offering public transit alternatives we are forcing many seniors to continue driving long past the time when they should be. With an aging population that is living longer, is this smart?

What about people who want alternatives to the car when driving is bad due to the weather? What about those who must go somewhere but are simply too tired to drive? What about those who would go out for the evening more frequently if only they didn't have to use the car? Not everyone has access to a designated driver. By focussing only on highways and the car, we limit our choices as a society.

In Durham Region, and Clarington in particular, the 407 will be going through prime agricultural lands. Agriculture is the number two industry in Durham. There is only a finite amount of good agricultural land in Ontario, and a large part of it has already been paved over in the Golden Horseshoe.

What about the environment and wildlife? We have already eradicated or endangered so many species in the world all in the name of progress. Does anyone care that we have destroyed the habitats of so many of our native species, or are these animals and plants only viewed as pests and/or nuisances to be exterminated?

With this highway, you will now have pockets of development further north, as various municipalities fail to resist the siren call of



developers. New residents will demand expensive municipal services to be brought ever further out, while mature areas wither and die as people leave. This is a waste and duplication of resources. Do we want to do for Toronto what the U.S. suburbs have done to their inner cities?

What will this highway do to all the streams and groundwater that spring and/or are fed by the Oak Ridges Moraine? Do you think that the rural municipalities will be able to provide municipal services to all their affected residents when the highway disrupts the water supply, which it most certainly will?

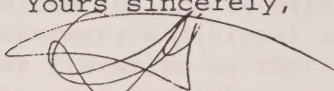
Assuming that the 407 is actually built, will the rest of it also be built only to minimum standards, as was the first part of the highway? So far, I have heard nothing about the recommended improvements being made, yet I hear that the highway is now open and will be free for a month. Oh goody, the chance to drive free on a highway that the OPP declares to be unsafe. Would the fact that the Minister of Transportation is a car dealer have any impact on any decisions that are made about this highway?

Fog is a regular problem in the area of the proposed highway. Another area known for fog problems is the proposed 401/407 link in Courtice. Added to the fact that the highway is already deemed to be built to less than acceptable safety standards, this makes for very dangerous driving, particularly at high speeds.

I am not at all confident that a full EA will be done because there seems to be some urgency on the part of this government to complete this project, no matter what. I am also not confident that the regional and municipal councillors in Durham who voted in favour of the highway on several occasions have the capacity to understand the complexity of the issues that must be studied before one can determine whether this highway is "necessary" and what the impacts of such a project would be. One must also look at alternatives in order to make any responsible decision. Aside from finding it hard to resist developers, municipalities and regional governments tend to like highways because they are usually built with provincial money, whereas transit services tend to come out of municipal budgets.

As an affected property owner, I expect to be kept informed of all developments concerning the 407. Thank you for your attention.

Yours sincerely,



Linda Gasser

cc: Planning & Environment Office, Central Region

Encl. Comment Sheet  
/lg

TABLE 2

## BREAKDOWN OF COMMENT SHEET ORIGIN

VENUE

MUNICIPALITY BY ORIGIN

|           | <u>Total</u> | <u>Markham</u> | <u>Pickering</u> | <u>Whitby</u> | <u>Metro</u> | <u>Other</u> | <u>No<br/>Address</u> |
|-----------|--------------|----------------|------------------|---------------|--------------|--------------|-----------------------|
| Markham   | 21           | 14             | 0                | 0             | 4            | 3            | 0                     |
| Pickering | 30           | 1              | 18               | 2             | 2            | 6            | 1                     |
| Whitby    | 23           | 0              | 2                | 19            | 2            | 0            | .                     |
| Oshawa    | 4            | 0              | 0                | 4             | 0            | 0            | -                     |
| Newcastle | 0            | 0              | 0                | 0             | 0            | 0            | 0                     |
| TOTALS    | 77           | 15             | 20               | 25            | 8            | 9            | 1                     |
| (%)       | (100)        | (19.5)         | (26.0)           | (32.5)        | (10.4)       | (11.7)       | (1.3)                 |



Stephen Leahy

Tel: (905) 655 - 4398 Fax: (905) 655 - 5888

Mail: Box 395 Brooklin, Ontario Canada L0B 1C0  
~~~~~

Nigel Wood
Review Co-ordinator
Ministry of Environment and Energy
Environmental Assessment Branch

RECEIVED

June 3, 1997

RE: Environmental Assessment for the proposed Highway 407/Transitway
from Markham Road Easterly to Highway 7 east of Brock Road

Dear Mr. Wood,

I assisted at a public meeting in Brooklin to discuss the impacts of the 407 East project last May. The meeting was organized by members of the 407 Action Group who had organized similar meetings in many villages and hamlets in Markham and Durham Region.

About 50 people attended the Brooklin meeting expressed the following concerns and comments:

- * The majority of those in attendance were very upset about the very short time frame in which they had to respond to a major project such as this, and one that contains extensive technical documentation.

- * Several said they were deeply involved with the Federal election and could not possibly get a chance to review and respond to the EA.

- * Others complained that there was only one copy of EA available and that could only be viewed Monday to Friday between 8:30 a.m. and 4:00 p.m. in the Town Clerk's offices.

- * Several people said they had only recently moved into the area and were unaware that Highway 407 East had been proposed. They stated that many of several hundred newcomers were also unaware.

Given the above, and the fact that nearly everyone at the meeting had specific questions about the project but had no idea who they could contact to get answers, I believe the Ministry should extend the deadline for the receipt of comments to at least June 30, 1997. Furthermore additional copies of the EA should be placed in the Town's three libraries so that residents will have a realistic chance to review and comment on these documents.

I look forward to receiving your response.

Stephen Leahy

1

117 Old Surrey Lane
Richmond Hill, Ontario,
L4C 6R8

Wednesday, June 4, 1997

Highway 407/ Transitway EA
Mr. Nigel Wood, Review Co-ordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario M4S 1H2

Dear Sir:

This is a submission in response to the EA Report dealing with the proposed partial expansion of Highway 407 east of Highway 48. In light of the fact that some residents in Cedar Grove were notified last week by the Ontario Realty Corporation that they are to vacate their homes by the end of August, I wonder how seriously the EA process is being taken.

I would first like to address the issue of need for the proposed Highway 407 extension. The initial purpose given for Highway 407 was that it was meant to be a Toronto bypass that would relieve congestion on Highway 401. The large number of proposed interchanges indicates that Hwy 407 is meant to meet more local needs.

From the discussion in the EA Report on projected future need and discussions with local residents east of Highway 48, the purpose and desire of Hwy 407 appears to be to relieve local congestion. The primary problems appear to be (1) the perceived spillover effect that the 407 will have on Hwy 48/Main Street/Markham Road and (2) the commuter traffic along Highway 7 in the section under study. The major reason to proceed at this time with the partial extension of the 407 is to relieve the traffic problems that are believed will be created by Hwy 407 stopping at Hwy 48. There was a study in 1996 titled, "Study to address traffic and environmental issues associated with the opening of Highway 407 at Markham Road." Building more highway to solve the problem of the highway's presence seems to be a strange and expensive remedy.

The obvious answer to concerns for Main Street/Markham Road would be to end Highway 407 where traffic can flow naturally into another expressway without burdening local roads. If there are contracts for construction to Hwy 48 that are costly to break, design Hwy 407 so that traffic is directed either to Hwy 404, onto Warden Ave. south to the industrial area, or onto McCowan Ave. to Markville Mall. A residue volume destined for local destinations

2

would continue east, similar to the situation at the eastern end of the Gardiner Expressway. Or, do the minimum construction required by contracts and do not open Hwy 407 completely to Hwy 48.

Residents living along Highway 7 in the area under review have expressed frustration with the commuter traffic from new residential development in the area. There are definitely planning problems, but to address them by building an expensive expressway is extravagant. A letter in the appendix of the EA Report from Jill Pritchard-Scott of the then Ministry of Energy in December 1991 states, "Our Ministry recommends that development of new mass transit be given priority over new highway work". We would therefore encourage the development of the Go line before any work is done on Highway 407." The reply from C.R. Lumley, Area Manager, Transportation Planning Section, MTO, was that until EA approval was received, that they could not program any works, transit or road. It appears transit is not being given serious consideration at this time.

The pressure exerted by municipal politicians comes from the desire to use Highway 407 as a catalyst for commercial development. In Durham the tax base is narrow, based mainly on bedroom communities. The presence of Highway 401 has not achieved the desired commercial development, so that it is highly questionable that the 407 would achieve what the 401 could not. Other problems exist that must be addressed, such as lack of services for industry.

Generally, the need for the 407 has shifted focus from a provincial perspective to a local one. The EA Report notes that demand will increase for transportation and that the 407 will be essential although not adequate in itself for meeting that demand. In addressing the goal of meeting the future traffic demands of the York/Durham interface, the following assumptions are made:

- transportation demand will increase
- efficiencies in transportation will not increase
- no intermodal shift will occur towards public transit or other alternatives
- fuel supplies will continue to meet increasing demands, cost will remain relatively stable
- low density commercial and residential development will continue, building in car dependency and increasing driving distances
- Cornell, Markham will be an exception as a non-car dependent community

I would like to point out some paradoxes and contradictions to show why better roads are not the answer to transportation problems.

(1) Even though Cornell will have services accessible by a 5 minute walk, Markham politicians are arguing Hwy 407 is necessary to support the increased traffic volume it will generate outside its borders.

3

(2) Although Hwy 407 is being welcomed as a cure for local congestion, it requires widening of north-south arteries to handle the extra traffic it will produce. "With the opening of the first stage of Highway 407, we are anticipating a major increase of traffic of the north-south arterial roads such as Bayview Avenue and especially Leslie Street," said York Region's Director of Operations-Transportation, Dave Aspinwall [p.5, Richmond Hill Post, Vol I, (3), June 1997].

(3) Roads that offer free flow of traffic, such as the 407, encourage people to drive further to access services.

(4) Transportation planners state that increased public transportation will require more road lanes even though buses decrease car traffic.

I draw to your attention that some of the answers for transportation problems are outlined in the report, "MTO's Northeast Metro/Southeast York/Durham Strategic Transportation Review (1995) MTO"—which seems to be ignored by the EA section, "Assessment of Transportation Systems Alternatives" in its analysis of the action "improve transit services". According to the EA Report, MTO's review recommended the 3 following components:

(1) The need for greater self-containment—living and working in the same community would decrease inter-regional commuting and greatly decrease transportation needs during peak hours.

(2) The need for more transit-conducive forms of development to increase the public transit share of trips crossing regional boundaries. Please note that the reconstruction of Hwy 7 itself has made public transit difficult until a separate busway is built that crosses Bayview, Yonge, Bathurst, and Dufferin streets at grade level. The current development in Southern York Region is sprawling, makes transit less efficient, walking impossible, and bicycling unsafe.

(3) The requirement for additional highways, roads, and inter-regional facilities, including the 407/Transitway.

The first two recommendations, which would be the most cost effective, have been ignored by governments.

In meeting goals for movement of people and goods in the area remember

(1) To focus on requirements for movement of people and goods and not cars and trucks.

(2) Decrease transportation demands through the building of compact, mixed-use development that provides for safe walking, cycling and transit that is convenient (Transit-Supportive Land Use Planning Guidelines, MTO, Ministry of Municipal Affairs and Housing,

reprinted July 1995) and thereby play a role in improving safety and air quality.

(3) Maintain the air quality in the less developed areas of Durham and York and improve the rapidly deteriorating air quality in Southern York and along the 401 in Durham.

(4) Improve road safety through road design and by decreasing road use. Public transit is safer than cars and trucks. Motor vehicle collisions are a major source of death and injury. Almost 1,000 deaths a year occur in Ontario from these collisions, much more than from homicides. They are the cause of 30% of head injury and 39% of spinal cord injury (Ontario Trauma Registry). Robert Kahn of the Canadian Injury Prevention Foundation stated that a total of 44 people daily receive head injuries from all causes. Four injuries will be permanent and each costs \$3 million in health care for a total of \$1.2 billion yearly for the costs associated with the head injuries caused by motor vehicles.

(4) Maintain farmlands. Local markets are growing and a local food source helps to decrease transportation needs. Loss of farmland to development is occurring worldwide.

(5) Recognize our natural assets of river systems and greenspaces as ends in themselves, as a means of removing CO₂ from the air and putting back oxygen. Preserve them. Capitalize on their ability to provide hiking and fishing for nearby urban residents and for visiting tourists. As population increases, nearby natural areas will take on greater importance.

The EA Report notes that the Rouge, Little Rouge, and West Duffin Creek provide managed cold fish habitats enjoyed by anglers and that the highway/transitway facility could potentially destroy these habitats. The fishery habitats of West Duffin Creek is noted to be excellent within the range of study. "This fishery provides quality fishing opportunities to large number of anglers due to the rarity of coldwater streams in Southern Ontario and its proximity to large urban centres. Water quality parameters characteristic of these watercourse types are sensitive to land and/or water use changes which are generally changed with urbanization and agriculture. As such, the protection of water quality, and physical features associated with coldwater fish habitat were considered an environmentally significant component of the project." p.4-15 EA Report. No indication is given how MTO will avoid degradation from clearing vegetation, filling sides when the bridge is built, highway runoff, etc. Focus on the current and potential use of this valuable resource and the losses that can occur as a result of the Hwy 407/Transitway being built.

Foodland

The Report comments that farmland is not a consideration for route placement in this section because the entire area is Class I and 2 farmland. If more than 4 lanes of highway are eventually built, significant losses of Class I and 2 farmland will be removed permanently from production. As well, placement of Hwy 407 through these lands will lead eventually to development sprawl.

Air Quality and Traffic Volumes

The serious issue of air quality was only given a passing comment with regards to the beneficial effect of improved public transit. While future technology can improve fuel efficiency and emissions, the increase in volume that will occur unless we change our way of moving and developing will wipe out any improvements. On top of population increases, **annual car kilometres per person driven in Canadian cities increased 25% from 5,008 km in 1980 to 6,374 in 1990** (p.5, New Scientist, September 14, 1996). If we continue to develop in the GTA along the lines of American-style sprawl, we can expect even greater driving distances; during the same period, urban Americans increased their annual driving from 9,042 km to 11,133 km.

Air pollution is an increasingly serious health problem in the GTA. MOEE Minister Norm Sterling stated that 1800 people die prematurely in Ontario because of air pollution. "This summer, millions of people in the Greater Toronto Area will be exposed to levels of smog which have been linked to a broad spectrum of adverse health effects including premature death, decreases in lung function, premature ageing of the lung tissue, increased hospital admissions and a worsening of symptoms for those living with lung disease. Recent evidence suggests that ozone, carbon monoxide and fine particles are responsible for many respiratory and cardiac related health impacts." p. 9, Municipal Clean Air Summit, Blue Ribbon C Report, June 4, 1996. On page five of the same report, we read, "The Ontario Ministry of Environment and Energy's document, *Air Quality in Ontario-1994*, reports that road vehicles contribute approximately 63 per cent of nitrogen oxides, 93 per cent of the carbon monoxide and 38 per cent of the total suspended particulate emissions into the City of Toronto's air."

The Ontario one-hour outdoor air quality objective for ground level ozone is a maximum of 80 parts per billion. In 1994, GTA municipalities had 175 total hours of air quality where ozone exceeded 80 ppb. Recent health studies have indicated adverse health effects at levels as low as 40 ppb. In addition to adverse health effects, elevated levels of ozone damage plants, crops, buildings and other materials. Crop damage from high ozone levels is estimated to be as high as \$70 million annually. p.6 Municipal Clean Air Summit, 1996.

According to Dr. David Bates of the University of British Columbia, the costs of adverse health effects caused by air pollution is 3 cents/mile for cars, and 53 cents/mile for heavy trucks with transport trailers. Transportation, Air Quality and Human Health Conference, York University, April 24 & 25, 1996.

Climate Change

The issue of CO₂ emissions and climate change has also not been addressed by this EA Report. "In addition to the direct health effects of air pollution from human activities, they also contribute to global climate change, or global warming. The main culprits in accelerating the natural green house are carbon dioxide, methane, nitrous oxide and CFCs. In Ontario, transportation and fuel combustion are the two largest sources of carbon dioxide. The GTA is in an area which has experienced a warming trend of 0.7 degrees celsius over the last century. As seen above, high temperatures can lead to increased ozone episodes." p.6,

Municipal Clean Air Summit, 1996.

Modal Shift

Reliance on expressways rather than transit and other modes will ensure the continued increase in traffic. The fact that two-thirds of Durham residents use the Go Train to travel to Downtown Toronto indicates that there is much room for improved transit use. The current stated 20% transit use can shift dramatically upward. The provision of good transit along Highway 7 can eliminate much of the need for more roads. The assessment of alternatives to Highway 407 was cursory and dismissive. I would like to add that I am not personally in favour of HOV lanes. They require too much co-ordination on the part of users with regards to arrivals, departures, and destinations. They are an inefficient use of roads; HOV lanes are often empty while adjacent ones are clogged. Carpooling should be encouraged without special HOV lanes as a means of saving money and fuel and reducing congestion, road requirements and CO₂ levels.

Fuel Shortages and Alternatives

Scientists are predicting that world oil production will start to decline in 20 years. "The world probably will reach its maximum oil production rate in the next 15 years. Growth in global oil-consumption rates during 1996 was considerably greater than its average annual growth for the past 10 years. Such increases are mainly driven by growing demand in countries where economic growth is accelerating: since 1985, energy use has grown approximately 30 per cent in Latin America, 40 per cent in Africa and 50 per cent in Asia...The past century of unprecedented economic growth has been based largely on increasing availability of cheap but rapidly dwindling petroleum resources...The coming era of permanent decline in oil-production rate and the economic and social implications of this phenomenon demand serious planning by world's governments." (Oil back on the global agenda, *Nature*, Vol 387, May 8 1997, p.121. A copy of this short article is included in this submission.)

We are still recovering from the oil crisis of 1973, with our large federal debt accumulated in large part by an attempt to cope with that crisis--through the formation of Petro Canada, and the mega projects to search for and produce more oil. **A switch now to more efficient systems of transportation such as buses and trucks** that can be later adapted to hydrogen or solar power will help to lessen the impact of future fuel shortages and the shock of oil price increases. Walking and cycling would of course escape the direct effects of shortages.

In 1992 the German Federal Research Ministry chose the one-track rural electric Kimitzschatabahn (Kimitzsch Valley Railway) to conduct an experiment with solar energy. Solar power comes from solar panels mounted on the carhouse roof rather than the cars (since the track is shaded). The electricity produced is fed directly into the overhead lines, and on sunny days, there is sufficient energy generated to operate two lightly loaded cars. Any excess power generated during low or no use is fed into the grid and the electric charges are reduced accordingly. William Tasker, *Germany's Solar Streetcars*, *Passenger Train Journal*, p. 15-16, December 1996.

Assessment of Transportation Systems Alternatives

This assessment is cursory and blatantly dismissive of alternatives to Highway 407. There is currently little transit available along Highway 7 and service is discontinuous geographically, eg. there is a gap in Richmond Hill public transit between Yonge and Bathurst. The evaluation of improvement of transit services does not seem to recognize that a significant shift from cars to buses would result in decreased traffic volumes. There would then be positive impacts on safety and a freer flow of emergency and other vehicles. Less road widenings would be needed. Less roads and traffic would result in a healthier environment. The injury and death rates are lower for transit than private cars. (Ontario Trauma Registry) The shift to transit would result in less deaths and injuries.

Comments regarding the impacts of improved transit services on the economic environment were written with no understanding of the importance of good transit on development and growth. Because transit has a greater potential for carrying higher volumes of people than the car, it can accommodate more economic growth in an area. For example, along and near the Yonge-University and Bloor subway lines are found the greatest concentrations of economic activity and highest real estate values in the GTA.

Air quality was mentioned as improving for the better with the use of transit. The improvement will be even greater if current development changes to allow for comfortable, safe pedestrian traffic and safe cycling. There would have to be more compact, mixed development, not the sprawl that is now taking place along the Highway 7 corridor. The only exceptions are the older parts of Markham and the new Cornell development, which is unfortunately being built on prime agricultural land, and being used as a reason for extending Highway 407.

Deficiencies by the Year 2011

Although the importance of transit is pointed out, as is the inadequacy of relying solely on Highway 407 for future needs, the discussion is based on a 50 % increase in traffic with the modal split staying constant at 20%. Governments have to start making concerted efforts to improve transit use. If 67% of trips from Pickering and Ajax to Downtown Toronto are by GO train, the potential exists for more transit use elsewhere.

Lack of Attention and Commitment to Ecosystem Concerns--Water

The correspondence between MTO and other government agencies shows the reluctance of MTO to acknowledge environmental issues and to commit to mitigation of negative effects on the environment. There is a lack in the EA about measures that will be put into place to mitigate these effects.

I would like to point out that MTO had to be pushed hard before it decided to put a bridge across the East Don River, and previous to that, little consideration had been given to Black Creek at Janes Street in initial 407 construction. MTO tried to ignore an earlier report from the 1960's connected to the construction of Highway 7 north (between Yonge and Bathurst) that had emphasized the need for protection of fisheries and valley resources and had

recommended that a bridge be built for environmental purposes.

Complaints have been made that officials from MTO and Ecoplan failed to take note of significant wildlife that was pointed out to them by local citizens in the provincially significant wetland area that is part of the complex feeding Second Marsh in Oshawa. This wetland is also planned to be crossed by a 401-407 link. This area would have to be spanned-- an impractical and costly feat. If it is not spanned, the recharge area for Second Marsh, two significant wetlands and a bog, will be destroyed. As well, 407 will come close to the headwaters of Tooley Creek. Farewell and Black creeks will be affected. The wetland complex is also part of a large wildlife corridor that the link would cut through.

It is important to note that disruption of water flow and loss of wetlands has been responsible for recent major flooding in Europe, the Mississippi valley and the Red River system, more frequent flooding in California, and the current flood warning for the Fraser River in British Columbia (Dr. Schrier, UBC). Removal of water from wetlands and rivers, along with the effects of climate change, contribute to more water available in the atmosphere for flooding. The summer of 1996 in southern Ontario was wet and, although day-time temperatures were lower than average, cloud cover kept night-time temperatures higher than average for an overall higher average temperature.

Correspondence from Metro Toronto and Region Conservation Authority to Ecoplan expressed concern over MTRC's limited staff and the time constraints imposed in meeting the needs of the EA. The Authority felt hampered in its ability to fulfill its role in protecting the health of the watershed and the highway.

Problems With the Process:

- (1) I found that the short time given to reply meant an inadequate study of the extensive material included in the EA Report.
- (2) I question why people have been given notice to leave their homes within 3 months if the EA has not been given approval yet.
- (3) Landowners have lost their rights for a hearing on expropriation of their land.

In Conclusion

The construction of the section of Highway 407 under review is presented as the way to cope with the traffic that is expected to overwhelm Main Street/Markham Road. Building more highway to solve the problem of the highway's presence is a strange and expensive remedy. The section west of Hwy 48 could be designed so that traffic would be directed to Highway 404, Warden Avenue and McCowan Avenue north before reaching Main Street/Markham.

Rather than looking at increasing traffic volumes and focusing on providing more roads and maybe some improved transit, it is time to recognize that we are heading on a collision course with higher fuel prices and poorer air quality, which in turn will lead to poorer health, more climate change, and more flooding. In the meantime, our development and

9

transportation systems will have become more car-dependent.

Environmental issues such as air quality (including its effect on health), climate change, and future fuel shortages that have not been dealt with by the EA will be affected by construction of Hwy 407. It is time to start putting concerted efforts into decreasing traffic demands by building decentralized, pedestrian-transit-friendly communities, the use of local produce, services and goods, and by the provision of good, convenient and low-priced transit.

Business should be encouraged to promote commuting by public transit rather than by car by providing subsidized transit passes rather than free parking. Tax changes at all government levels can assist in this action. The result will be cleaner air and water, much less land lost to the car, and healthy communities that invite walking and cycling and healthy ecosystems.

Thank you for your time, I hope that this submission helps to bring about an informed decision that benefits the involved communities and protects the environment.

Yours truly

Gloria Boxen

1 enclosure

cc MTO

Oil back on the global agenda

A permanent decline in global oil production rate is virtually certain to begin within 20 years. Serious planning is needed to deal with the economic consequences.

Craig Bond Hatfield

In 1985, global oil consumption was 59.7 million barrels per day¹; by 1995 it was more than 69 million barrels per day². This 16 per cent rise in demand was supplied almost entirely by an increase in oil production by members of the Organization of Petroleum Exporting Countries (OPEC) — mostly in the Middle East — from 16.1 to 25 million barrels per day^{3,4}. Growth in production in the North Sea, Latin America and Asia has barely exceeded precipitous declines in US and Russian oil production.

Geological data indicate that, during the next ten years, oil production outside

OPEC countries will remain incapable of significant, sustained growth and is likely to begin a permanent decline during the first decade of the twenty-first century. This seems inevitable because new discoveries of reserves are not keeping pace with production. Globally, new discovery has averaged less than 9 billion barrels per year since 1985 (ref. 4), while consumption has averaged more than 23 billion barrels per year⁵. The rate of discovery peaked in the 1960s and has since declined⁶, despite record high rates of exploration in the early 1980s.

Low reserves

Most of the reported 'growth' in oil reserves during the past decade has been from revised estimates: in 1988 and 1989, Venezuela, Iran, Iraq, Abu Dhabi and Saudi Arabia reported upwards revisions totalling 277 billion barrels⁷. This accounts for nearly all the growth in global reserves of oil from 1987 (700 billion barrels) to 1990 (1,000 billion barrels). Because it is improbable that these OPEC countries had valid reasons for such gargantuan and simultaneous revisions, it has been suggested⁸ that the increases are political rather than real, perhaps intended to discourage exploration for oil elsewhere in the world or to help establish OPEC production quotas.

If it is the case that the world's oil reserves are indeed as great as 1,000 billion barrels, a continuation of the current oil consumption rate of 26 billion barrels per year would

deplete global reserves by the year 2036. The average estimate of about 550 billion barrels of producible oil yet to be discovered⁹ would add another 21 years in the unlikely event that there is no growth in consumption rate.

But such calculations are unrealistic, because global oil production rate will pass its maximum and begin to decline long before resources are exhausted. For example, oil production in the United States reached its peak in 1970 and has declined since, as was clearly predicted in 1956 (ref. 8). This forecast was the first to apply to oil production a mathematical model that yields growth in production rate until about half of the producible resource has been consumed, after which the production rate declines until the resource is exhausted. It is possible that new oil-recovery technology, as used in the North Sea, could extend growth in production rate beyond the point at which half of the producible resource has been consumed, but in this event the subsequent decline in rate would be accelerated.

How long can growth continue?

For how long can the global oil-production rate continue to grow? Even if the reported reserves were accurate, the addition of the average estimate of about 550 billion barrels of producible oil yet to be discovered would yield 1,550 billion barrels of oil remaining to be produced. Taken together with the approximately 800 billion barrels already consumed, this gives 2,350 billion barrels of 'ultimate' production, which is greater than several recent estimates of ultimate oil production¹⁰. The mid-point, at which half of the ultimate production will have been consumed, would be the year 2011, if production rate remains at its present level.

But if, as is likely, some of the reported reserves do not exist, or if, as discovery rates of recent years suggest, we have less than 550 billion barrels of producible oil yet to discover, or if consumption continues to grow, cumulative production will reach half of the ultimate production in the first few years of the twenty-first century. In this case, global oil-production rate will peak and begin its decline during the first or second decade of the twenty-first century.

If global demand for oil grows from 1995 to 2005 by 16 per cent, as it did from 1985 to 1995, demand for OPEC oil by the year 2005 will be 36 million barrels a day. OPEC currently produces 25 million barrels a day and has an estimated production capacity of about 29 million barrels a day, excluding Iraqi production. (Iraq's maximum produc-

tion rate over a year is 3 million barrels a day.) So OPEC must increase its production capacity significantly if it is to meet even conservative projections of demand by 2005. What will maximum potential production capacity be between 2010 and 2015, when OPEC will be near (just approaching or just beyond) the mid-point of its ultimate production?

The world probably will reach its maximum oil production rate in the next 15 years. Growth in global oil-consumption rate during 1996 was considerably greater than its average annual growth for the past ten years. Such increases are mainly driven by growing demand in countries where economic growth is accelerating: since 1985, energy use has grown approximately 30 per cent in Latin America, 40 per cent in Africa and 50 per cent in Asia¹.

Energy consumption in developing countries could surpass that in economically developed countries within 20 years. There will be growing competition for a dwindling oil supply, which raises the question of how long standards of living can rise in the developing world and how long they can be maintained in the developed world.

Despite the intensive, intergovernmental debates on the environmental effects of energy policies, geological constraints on the amount of inexpensive fluid fuel that can be produced will soon override governments' decisions about future rates of fossil-fuel burning. The past century of unprecedented economic growth has been based largely on increasing availability of cheap but rapidly dwindling petroleum resources. It is unfashionable in energy policies and economic theory to recognize a time limit on growth in oil consumption rate. But the arithmetic on which my argument is based must be acknowledged. The coming era of permanent decline in oil-production rate and the economic and social implications of this phenomenon demand serious planning by the world's governments. □

Craig Bond Hatfield is in the Department of Geology, University of Toledo, Toledo, Ohio 43606, USA.

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5. Iremonger, L. F. *World Oil* 216, 77-88 (October 1995).
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7. Mazzari, C. D., Reed, D. H. & Attanoui, E. D. *Science* 253, 146-152 (1991).
8. Hubbert, M. K. in *Drilling and Production Practice*, 7-25 (American Petroleum Institute, Washington DC, 1954).

Highway 407 / Transitway EA
 Mr Nigel Wood, Review Co-ordinator
 Ministry of Environment and Energy
 Environmental Assessment Branch
 250 Davisville Avenue, 5th Floor
 Toronto, Ontario M4S 1H2
 440-3450 fax 440-3771

May 31, 97

Dear Mr Wood,

I am farming with my father on the southside of the proposed 407 extension at 2042 REESOR Rd in Markham. I have many specific concerns regarding the extension of 407 past Markham Rd.

- At present there is no over pass in REESOR Rd which will effective dead end REESOR Rd between 407 and Markham. There are also plans to not use bridges but culverts over several environmentally significant areas.
- The emissions from the 407 will be orders of magnitude higher than any modern garbage incinerator (I can't imagine the approval of a garbage incinerator (even in Markham) without a full extensive EA. The environmental approval process should be at least as rigorous as for any proposed incineration proposal. This road

and its impact on the environment should not be considered lightly no matter how big of a rush that Markham Town Council is in.

- The only reason this is being given a fast track approach is the pressure from Markham Town. The sad fact is that the 407 will not relieve the traffic congestion from Highway #7 or #48. Commuters are going to use the free Highway #7 at least up until capacity (congestion) before they are willing to pay a fee to use a toll road.

- The only period when there is a problem on Highway #7 and #48 is between the hours of 7:30 - 9:00 am and 4:30 - 6:00 pm

and this is only on some days (i.e. bad weather) certainly not every day. Therefore, a new multi-lane highway is going to be constructed to potentially serve the public for a few hours a day for a few days a week.

If this road is being built to serve this traffic congestion then I can think of many other more appropriate uses of this money (i.e. healthcare, education, etc.)

This is a very bad time to justify this expense when there are real viable alternatives (widening Steeles, car pooling, improved mass transportation, better regional planning, etc); all having lower impacts on the Environment.

Markham Town Council should not have this much impact on the decision making process of the Province of Ontario. Why not wait to see the true usage of the 407 from Markham Rd, to determine the viability of extending it through 3 major river valleys and several tributaries as well as some of Ontario's best farmland. To this point all these decisions are being made on projections from consultants reports with many assumptions. The traffic density west of Markham Rd is high but to the east all the 407 will accomplish

is to destroy enough of the agricultural and natural features of the area to make it easier for Markham to warrant the full conversion of the area to other non-rural uses.

When making the decision to destroy thousands of acres of land one must bear in mind:

- We live in a democratic society, people have the right to work and live wherever they want, no one is forcing people to commute long distances to work (including myself). Government only has the duty to provide alternatives, that is, public transportation car pool lanes, etc in order to make reasonably efficient use of the existing highways.
- The function of a road is to move people not cars. I travel to Etobicoke everyday from Markham (by choice). There is virtually no incentive for me to car pool except to save a small amount of gas money. If there was a car pool lane on the 401 and/or Don Valley Parkway I would drive my wife to work, which is 15 minutes out of my way, then proceed to Etobicoke because I could travel the post speed limit in the car pool lane.

There is no incentive to do this now because it takes any extra $\frac{1}{2}$ hour to line up with single person vehicles. I have done my own survey over the past 3-5 years and I suggest ~~that~~ over 75% of cars contain one person in rush hour. I would suggest a study of the percentage of single person vehicles on the 401 / Don Valley during rush hour. All of these vehicles are travelling to roughly the same destination at the same time or else there would not be a rush hour. Give people a reasonable incentive to want to car pool and the traffic problem would be solved (with proper enforcement). I also drive by the house of a person that works beside me but why would I bother to be inconvenienced to car pool. The problem is not too many people, it is too many cars, too much air pollution, high required road maintenance.

- Being an engineer myself, I assume your engineers can be more creative than to solve the problem of too many cars by building a major new multi lane highway which must be maintained just for a few hours of traffic congestion. If this is the best you can come up with in a time of government cut-backs then I suggest you hire some people who approach problems more creatively. What would be the solution if no new roads could be built for 25 years? (Force people to think) Could you imagine if industry corrected a short fall in capacity (20% of the day) by simply increasing overall

capacity. At some point you would have a tremendous machine with large overcapacity that can not be cost effectively serviced. By judging the conditions of our roads I wonder if we aren't past that point already.

- the higher the level of Ontario government subsidy to the car (especially the commuter) the more difficult it is going to be for mass transportation to compete. I can't believe how backward one must think to reduce funding to mass transportation in order to build more roadways. In the short 15 years that I have been driving into Etobicoke the visible smog levels have risen to the point of disgrace. The people creating this pollution (including myself) must be taxed to the point where it is no longer just convenient to drive by myself to work. The government has a responsibility to provide the incentive and the alternative. It is then up to the public to choose. This would be no different than other luxury taxes. The only problem with the present GTA road capacity is the commuter; a single person vehicle is a luxury, convenience and by one's personal choice.

- There is more than ample road capacity except during rush hour. I imagine how successful the GO and TTC system would be if there was a toll on the DON VALLEY and 401 during rush hour. The people using mass transit should be rewarded and the gas hogs pollution generators, such as myself, must be penalized. How far do we have to go before someone wakes up and realizes we are destined to be the L.A. of the north. In Europe, the population density and pollution levels forced a successful mass transportation system. Around the GTA we have the population density and are well on our way to the emissions levels. Do we always have to be a decade behind the Europeans?

- All that I have heard at these meetings is the "technically preferred route". If a true technical analysis was conducted one would determine that the problem exists only in a narrow time frame and that the root cause of the problem is the number of single person cars not the actual number of people travelling. Of course there is lots of support for the 407 just the same as people loved buying the cheaper leaded gas rather than pay a few cents more for unleaded. The solution eliminate leaded gas as an option.

I don't feel that this is a typical complaint letter using the NIMB excuse. I have presented some alternatives and a defensible rationale for not extending the 407 at the present time. One would almost think that these decisions are being made by someone who manufactures or sells cars, not the Ministry of Transportation or Ministry of the Environment who are in the business of ^{regulating the} moving people and cargo in an acceptable fashion. If there is to be anything left for the next generation, as a society, we must at some point move towards sustainable development. This will include striving towards the most energy efficient, ecologically friendly technique to move people. This may seem more expensive in the near term (adjustment period) but one only has to look towards

some of the larger U.S. cities that have continually accommodated the convenience for the automobile, to see what the ultimate cost will be. Emission controls on cars is only a small step compared to minimizing vehicle traffic and maximizing people traffic. As with most sustainable approaches, this is just common sense. The natural reaction is that it can't be implemented. There is no question building a bigger highway infrastructure is the easy way out. The longer we wait to start some creative solutions the harder and longer it will take to implement them. Too often, local political pressures and industrial lobbying make the decision making process one sided.

I have only lived in Markham for my life (35 years)

and I shudder to think of what it will be like in the year 2035. Most of the people making the decisions will not be here to see the result (this probably explains their thought process). At some point I am sure the youth of the day will be tired of our present philosophy and rebel. I know the 407 will be extended and I know this public consultation process is as simple as going through the motions to allow decision makers to sleep at night knowing they have done the so-called due diligence. I am not sure why I took the time to write this letter except maybe I will be able to sleep at night. I guess it would be easier too except if it was something that was environmental beneficial such as a solid waste or chemical waste processing facility. The

emissions would at least be lower.

I look forward to your response and the date
of our meeting where some of the above can be
justified to me.

Best Regards,

Robert Reesor
(905) 640-3904
680 Elm Rd
Stouffville, ONT
L4A 1A3

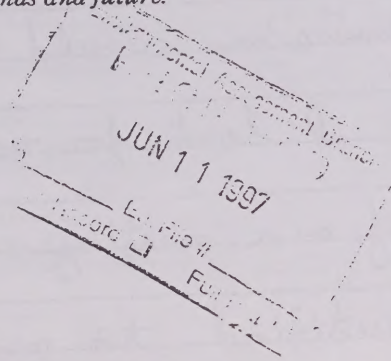


Duffin-Rouge Agricultural Community

...over 100 families uniting to preserve our homes, farmlands and future.

4 June 97

Mr. Nigel Wood, Review Coordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto ON M4S 1H2



Dear Mr. Wood:

We are writing to request a bump-up to individual EA for Highway 407 east of the (proposed) new Markham Bypass. We realize the importance of solving problems associated with opening 407 to Markham Road next year, but we believe that exits planned for 9th Line and the Bypass can mitigate these in the short term.

"Fast-tracking" 407 all the way to Brock Road is already causing serious disruptions in our community. In the last few days at least five members of our association have received from Ontario Realty Corporation notice to vacant their homes by the end of September. Despite "public consultation" over the past year, all but one of these tenants were taken completely by surprise by this news, and they have been devastated by it.

Further, we are working with the Towns of Markham and Pickering on the longer-term planning for this rural community between the Little Rouge and Duffins Creeks, running north from Steeles and Finch and the Rouge Park to about a mile above Highway 7. The planned major intersection at Markham/Pickering Townline makes a mockery of the idea of preserving prime agricultural lands in the area, allowing for the movement of large farm vehicles, and providing for recreational uses such as biking lanes and hiking trails. Quite likely, one exit at the new Markham Bypass and another one further east, when needed to serve the planned Seaton community, would be more than enough. A major rural study for the Pickering side of this community is scheduled to begin in the next couple of weeks and to be completed around the end of the year. From our point of view, the EA for the 407 should respond to the results of this study, and not the other way around.

Yours sincerely,

Bruce Flattery

cc: Tom Melymuk, Pickering Planning Dept.
Jim Baird, Markham Planning Dept.

Bruce Flattery - President
294-4719

Bev Driscoll - Secretary
471-5331

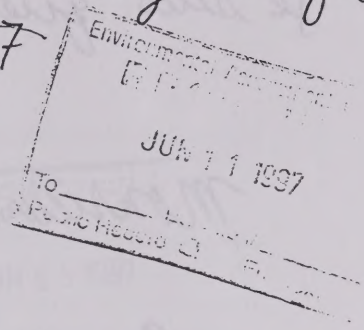
Ellie Nash - Treasurer
294-0820

P.O. Box 10

Locust Hill, Ontario

LOH 1J0

I am still interested in purchasing the farm
May 31/97



Mr. Nigel Wood,

Regarding the proposed new hi-way
linking Taunton to Brock (greenwood)
is a good "urban sprawl"
idea. But not a good
"preservation of Heritage Homes"
and the surrounding fertile
land idea. We should limit the
confusion of urban sprawl, by
letting the "sprawl" happen more
on the outskirts of the city of
Toronto; not extending past the
richest farmland. Sincerely
lot C-M-enc #4. Brigitte Lacaille
(505) 751-3659.
Road access is fine as it is. 289

Je suis quand même intéressée à acheter la ferme
Le 31 Mai 1997.

Monsieur Nigel Wood ;

Au sujet des développements urbains
pour accommoder les gens de ville
je suggère que le développement
soit limité afin de ne pas
pouvoir écologiquement notre
terre fertile et concentrer
plus sur la préservation
des beautés naturelles.
Sincèrement,

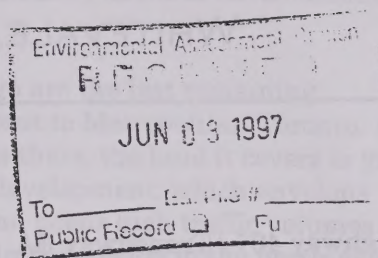
Briette Lacombe

1983-1997
début

LOT C-11
concession. 4.

Les routes sont parfaitement accessibles
296 tel qu'elles sont.

495 Whitevale Road,
Whitevale, Ontario, L0H 1M0,
May 30, 1997.



Dr. Nigel Wood, Review Co-ordinator,
Ministry of Environment and Energy,
Environmental Assessment Branch,
250 Davisville Ave., 5th Floor,
Toronto, Ont., M4S 1H2

Dear Dr. Wood:

The purpose of this letter is to voice my concern about the proposed routes of the 407 across the Rouge River and West Duffin's Creek.

The Environment Assessment Report notes that the vulnerable red-sided dase had been found in both these waterways as well as Green, Wood and Leopard Frogs and American Toads. I understand that there is concern that our amphibian population is decreasing in Canada. I do not believe that constructing a highway with a potential for 12 lanes can protect these species from noise, road de-icing compounds and other contaminants.

Indeed, on pg. 4-15 of the Assessment Report it is noted they will "have the potential to threaten the maintance of a healthy aquatic community." Further the Report notes that the Whitevale corridor is a particularly valuable wildlife habitat.

Moreover, how can an expressway we constructed without providing the affected residents with adequate, clean drinking water? As noted in the Report, over half of the wells in the area are relatively shallow and will be affected if the road is built.

In addition, there is a proposed access road through Whitevale village via the North Road. This road must not be built to access 407 because it will destroy Whitevale, a heritage hamlet, to say nothing of the noise pollution problems which have been partially solved in other areas by high sound barriers. Hardly compatible with a heritage designation.

I beg you not to destroy this valuable and fragile area.

Yours truly,

A handwritten signature in cursive script, appearing to read "Sylvia P. Cows".

Sylvia P. Cows.

cc. MTO Planning and Environment Office
Al. Paladini, Minister of Transport

437 CHURCHWIN STREET
WHITEVALE, ONTARIO, L0H 1M0
CANADA

26 May, 1997

Highway 407 / Transitway EA
Mr. Nigel Wood, Review Coordinator
Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue, 5th Floor
Toronto, Ontario, M4S 1H2

Dear Mr. Wood:

**Re: "Environmental Assessment for Proposed Highway 407 /
Transitway from Markham Road Easterly to Highway 7 East of
Brock Road"**

This is a remarkable document! When I first saw it, all six inches of it, I could not believe that I would read even part of it. However, I have read it all, some sections several times. The authors have done a painstakingly detailed job and, against all the odds, have produced something that is almost readable. I now feel that I know much more about the country through which this Highway / Transitway will be constructed. In studying the report, I have moved from field to hedgerow, from woodlot to wetland, from valley to stream. I have been introduced to an enormous variety of wildlife, animals, fishes, trees, shrubs and grasses. I have been put in touch with farmers and fishers, homeowners and tenants, schoolchildren and their grandparents. The report has brought all this to me in clear language and uncluttered description. For this collection of information, at least, the authors should be commended and thanked.

So what is wrong with all this? Why does this report, and the message it conveys, fill me with increasing gloom, cynicism and resignation?

I believe this is due to the combined facts that, for now, all this countryside, the farmlands and the open spaces, does exist and that, in the near future, this Highway will carve a wide and destructive swath through it. There is an overwhelming, crushing sense of tragic inevitability. After all, this report was written by people whose job it was to justify the construction of the Highway. They were not charged to consider alternatives, nor was there very much discretion in where the highway has to go. They have to decide on the details

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e-mail: jthompson@banks.scar.utoronto.ca

of the route, and then try to minimize the inevitably harmful environmental effects that will ensue.

The lands through which this Highway will go are the last remaining, significant open and agricultural space adjacent to Metropolitan Toronto. A highway is an irreversible creation - once it is there, the land it covers is gone forever for any other use. A highway breeds development, which envelops even more land. A highway which is a toll road needs high traffic volumes to bring in revenue; high traffic use, especially in this region to the north-east of Toronto, can only come from increased development; so the lands must go. Not just 100 metres of right-of-way, but hundreds of irreplaceable acres to suckle the parasitic web of development spawned by the highway. One only has to look about the ravages resulting from 401 and 404 to see what is inevitable along 407.

There is a casual arrogance about the report in attempting to justify the imminent environmental destruction. Species are only 'important' if they are 'significant' or 'rare'. Everything else, common or garden varieties is unimportant, no matter how abundant. The latter can be displaced or wiped out with no concern. Old fields and hedgerows do not have much in the way of 'unusual' vegetation, so they are 'unimportant' and can be done away with. The area is 'not one of extraordinary scenic beauty', so the Highway's intrusion will 'not have much of an effect'. Some watercourses are 'intermittent' or 'seasonal', so they can be stopped up or diverted with culverts. Some buildings will have to be demolished, but 'only a few are historic' and most are 'already owned by the Province and only occupied by tenants'. Tenants can easily be evicted and the run-down old properties knocked down. Already, it is said, the ORC is making private deals for the sale of lumber, artifacts and memorabilia from the doomed properties. So many times the phrase 'not significant' comes up, as an apparent justification for the imminent destruction. The authors forget that the real significance is that this open land still exists, but why should that bother them when their mandate is to destroy it?

The Highway will generate development; highways always do. 407 will follow 401 and 404 in this regard. 407 will encourage the eastwards sprawl of Markham; it will encourage the persistent folly of airport development on the Federally-held public lands; it will encourage the northwards sprawl of Pickering and its offspring, Seaton. This Highway will result in an obscenity of development north-east of Toronto, comparable with that in Mississauga, Bramalea, Malton and Vaughan. But that is, of course, what the planners and developers want. Open space and farmland, river valleys and woodlots, are to these barbarians, just acreage in urban shadow waiting to be paved over, all in the name of progress. The legacy of the Prussian jackboot and Panzer Divisions will, in the end, be no more destructive than what is being

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done around Toronto by the planners and developers, and their allies in governments at all levels.

So what should be done? I'm realistic enough to recognize that my views will not receive a sympathetic hearing either in your Ministry or, especially, in the Ministry of Transportation. However, I'm going to make some suggestions anyway.

Ending 407 at Markham Road (Highway 48) is clearly nonsensical. Pending resolution of the many problems to be faced in and east of Markham, 407 should not be opened for general traffic any further east than 404. However, the development of the Transitway west of 404 and from 404 to 48 should be expedited. Until it is ready, the already constructed roadway east of 404 should be used only for transit, with parts of the 404/407 interchange to the east being used as a transit hub and exchange.

Extension of 407 east of 48 should start with the Transitway, or the roadway should be restricted to use by transit vehicles. It is folly to extend 407 only as far as Brock Road. The construction should proceed east to Durham Road 23 and then loop down to the 401. Only when the complete link to 401 is completed should 407 east of 404 be opened to normal traffic. Until then, the use should be only for transit vehicles, and even after that transit should be given total priority.

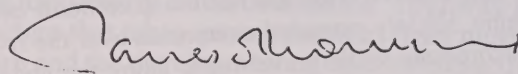
New and expanded GO train service should be introduced using existing railway lines, linking to the Transitway at appropriate crossings.

Recognizing that my views will not be heeded and that 407 will be extended as a freeway for all types of traffic, its destructive impact on the environment must be kept to an absolute minimum. East of 48, at least east of the Cornell development, the Highway will go through 'open' country (until the development sprawls along it). There must be no lighting on the road while it is in the rural environment. Road bridges across streams and valleys should have very high walls, if they are not completely enclosed as elevated tunnels, to reduce the noise which will be channeled down river valleys. Run off (rain, slush, salt, oil, etc.) from the road must never be allowed to enter streams and watercourses, or pollute people's wells. Buildings of any possible historical and cultural interest should be moved, not destroyed. Many more small bridges, or very wide, natural bed culverts, should be part of the construction so that interference with the natural watercourses be as little as possible. Protection for the wetland and other significant (my word) areas, especially in Units 1370, 1484, 1530 and 1550 should be very much enhanced.

I live in Whitevale, about a mile south of where Highway 407 / Transitway will cross the West Duffins Creek. I am extremely concerned about the effect of this construction on the Creek itself, which is a notable fishing stream and encompasses an environmentally sensitive area and much natural wildlife. I am extremely concerned that the water supply to my well will be polluted by run off from the road. I am extremely concerned that our rural peace and quiet will be destroyed forever by the thunder of traffic. I am very concerned that the darkness of the northern sky will be destroyed by light pollution as has happened to the south. One reason for moving to the country was that we like to see the stars and have the peace of a silent night. Now, both will be taken from us and they will never come back.

All in all, as you can no doubt understand, even if you don't agree, I believe this road to be a thoroughly bad undertaking. It is a product of outdated planning, entirely unsuited to the needs of the next millennium. It perpetuates the follies imposed in the 1960s. And above all, it continues the destruction of what little remains of our open space and farmland. For that crime, we will all, sometime, somewhere, be called to account. It may not be in my time, or yours, but, when we have destroyed all the farmland and simply can no longer feed ourselves and the people are starving, the full tragedy of Highways like 407 will become apparent. But, by then it will be too late. Will we never learn?

Yours sincerely



James C. Thompson

c.c. Highway 407 /Transitway EA
Ministry of Transportation
Planning and Environmental (sic) Office
Central Region, 3rd Floor, Atrium Tower
1201 Wilson Avenue
Downsview, Ontario, M3M 1J8

31 Freeman Road
Markham, Ontario, L3P 4E9
Saturday, May 3, 1997

Ministry of Environment and Energy
Environmental Assessment Branch
250 Davisville Avenue
5th Floor
Toronto, Ontario, M4S 1H2

RE: Proposed Highway 407/Transitway from Markham Road Easterly to Highway 7 East of Brock Road.

To whom it may concern,

Thank you for publishing an invitation to comment on the proposed highway 407/transitway in our local newspaper, The Economist and Sun.

Opportunities to avoid the creation of wastelands beneath highway overpasses must not be missed especially when the potential to enhance accessibility to valuable conservation areas exists. The proposed expressway intersects with the Rouge River, Rouge Creek, West Duffins Creek and Duffins Creek in the Markham and Pickering regions. These waterways are valuable, non-renewable natural resources. Any construction that does not optimize their use is unacceptable.

Take a short walk down the Seaton trail from Highway 7 to Whitevale in the Fall and witness the migration and spawning of salmon from Lake Ontario. Spring on the Rouge River is a favorite locale for fishing, bird watching and tree planting expeditions. These fragile ecosystems which may be endangered or rendered inaccessible, will become a liability if imaginative and creative ways are not found to build environmentally friendly overpasses.

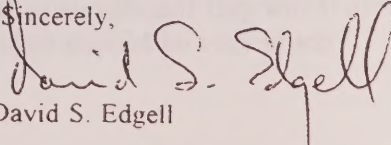
Imagine slightly extended overpasses over the rivers. These could be constructed broad enough to incorporate small gravel roads along the undeveloped waterways providing passage for hikers and easy access for emergency and maintenance vehicles. Accessibility and visibility in construction would help to ensure the security of these sites. Appropriate but discrete fencing would prevent humans and animals from straying onto the highway. Drainage preventing road salt and road spills from contaminating the water and destroying the natural habitat is essential. Lighting, rest areas, scenic look outs, architectural design and selection of construction materials could enhance the area and demonstrate that we are proud of our ability to build a highway that showcases our respect for our resources today and our commitment to the future.

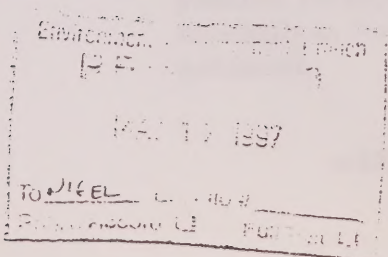
The alternative is not acceptable. Dried up contaminated river beds devoid of wildlife, will only reflect urban decay and the advance of the concrete jungle. Truly this would be a liability for future generations.

I would appreciate a reply and the opportunity to discuss my concerns with interested parties.

On behalf of our heritage, our children,

Sincerely,


David S. Edgell



Lorne D. Almack P.Eng. CMC.

RR#5 Claremont
Ontario, L1Y 1A2
4745 Brock Rd.
905 649 2202
FAX 905 649 3566

Mr. Nigel Wood, Review Co-ordinator
Highway 407/Transitway E.A.
Ministry of the Environment and Energy
250 Davisville Ave. 5 th Floor
Toronto, ON. M5S 1H2

April 29, 1997

RE: " Take an Opportunity to Express your Views" - 407 east of Markham

Dear to whom is responsible,

Extending 407 east of Markham is evil, polluting, uneconomic and injurious to the public interest.

Evil: Destroys Gods creation of best, most productive foodland, needed to feed an exploding world population. Future deaths of millions of children caused by malnutrition will be on the conscience of highway 407 promoters. Past generations can be excused profligate conduct because they didn't know better. But this is 1997.

Uneconomic: A subsidy to encourage urban sprawl, commuting, bedroom communities, more regional roads and inefficient urban form which injures Ontario's competitiveness and is high cost/ low benefit infrastructure.

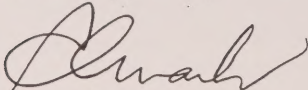
Polluting: encourages the private motor car and highway truck transportation the worst generators of green house gasses and local air pollution. Is destructive of Ontario's remnants of natural habitat.

Public Interest: The people would be better served with high density public transit and affordable housing within existing low density urban boundaries. Highway induced urban sprawl is unaffordable infrastructure that takes scarce resources from more efficient transit, quality education, social welfare and the development of efficient attractive cities.

General Motors, Exxon and the UDI should not be subsidized with taxpayers money or at the cost of inefficient urban growth, foodland destruction and air pollution. Our addiction to the automobile has to be treated.

An alternative, now is: route highway 407 south west of the Rouge Park to merge with a fully developed 401. Make all provincial highways fully self financing toll roads starting with the 400 series. Let roads compete with transit on an even field. Get out of Debt.

Yours truly,



Lorne Almack

cc Hon Mike Harris, Hon Noble Villeneuve, Hon Al Leach,

April 27, 1997

In response to your invitation to comment on the approval of a transitway in a separate corridor adjacent to Hwy 407, re: Steeles Ave. and the Pickering/Markham Townline,

I AM COMPLETELY AGAINST THIS IDEA:

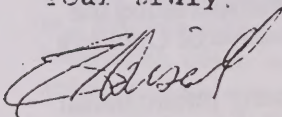
As a 17 year tenant on the Townline I greatly object. The tenants in this area have undergone enough hardship over the past 20 years ie: Expropriation and now land sales at unreach-able prices, the last thing we want is urbanized traffic flow. Go bug someone else for a change. The tenants in Whitevale, and the Duffin-Rouge Agricultural Community are united, and strongly opposed to any new roads being built at all.

In case you might remember "People & Planes", at the time of expropriation. Now you have to deal with the same kind of vigilance, should you pursue this stupid plan:

We are a quiet farming community, and intend to keep it that way.

This is not just one persons opinion. Believe me, there are hundreds of families that will not let this happen.

Your truly,



B. Driscoll
8328 14th Ave
Markham, Ontario
L6B 1A8

MAY 01 1997

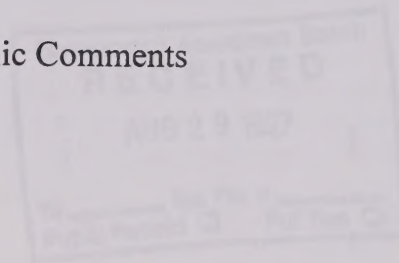
U. Wood

**EA Review: Highway 407 / Transitway****(Markham Road Easterly to Highway 7 East of Brock Road)**

3rd Floor, 1000 Lakeshore Blvd. East
 1000 Lakeshore Blvd. East
 Scarborough, Ontario
 M1S 1A5

Tel: (416) 325-4000
 Fax: (416) 325-4000

28 August 1997

Appendix Five**MTO Response to Government/Public Comments**

Mr. B. Johnson

Environmental Assessment Branch
 Ministry of Environment and Energy
 3rd Floor
 270 Dundas St. West
 Toronto, Ontario
 M5G 1K2

Dear Mr. Johnson:

Re: Environmental Assessment
 Highway 407/Transitway
 Markham Road Easterly to Highway 7 East of Brock Road
 MTO Responses to Agency and Public Review Comments

The Ministry of Transportation has reviewed the agency and public review comments relating to the above-referenced Environmental Assessment (EA) as forwarded by Mr. Nigel Wood of your office. Attached please find the MTO's responses to all of the issues raised in the comment submissions.

For the most part, the MTO addressed the issues in the Environmental Assessment as submitted in April 1997. However, several comments appear to be related to the details of design and potential mitigation measures that can only be finalized at the design stage of the project. To provide for the appropriate consideration of such items, the ministry will work collaboratively with all affected stakeholders during the preparation of the EA to develop the Stakeholder Consultation Process (SCP), as defined in the EA document, to be used during the design and construction of the facility. The attached document includes some suggested modifications/clarifications to the SCP, which with the SCP's approval, could be used to ensure that the SCP fulfills all of the appropriate concerns raised during the recent review.

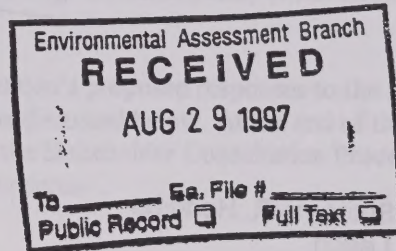


Planning & Environmental Office
Central Region
3rd Floor, Atrium Tower
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Tel: (416) 235-5482
Fax: (416) 235-4940

26 August 1997

Ms. B. Johnston
Assistant Director
Environmental Assessment Branch
Ministry of Environment and Energy
5th Floor
250 Davisville Ave.
Toronto, Ontario
M4S 1H2



Dear Ms. Johnston:

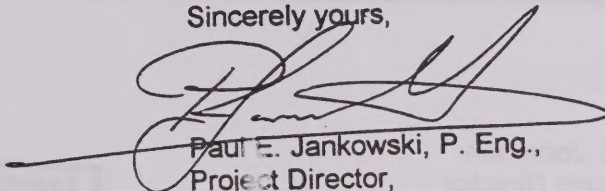
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Highway 407/Transitway
Markham Road Easterly to Highway 7 East of Brock Road
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I hope that the attached is of assistance. If you require any further information, or have any further questions, please contact me.

Sincerely yours,



Paul E. Jankowski, P. Eng.,
Project Director,
Highway 407 East

Attach.

cc: J. Sutherns/R. Hodgins
F. Leech
P. Reynolds

C:\DATA\PA\LETTERS\JCHNS\W\NICE
25 August 1997

Agency Comments on Highway 407/Transitway Environmental Assessment

A review of the comments received from the various agencies and the public indicate that the comments fall into four categories:

- 1) Observations requiring no action (i.e. no question asked/requests made);
- 2) Comments already covered by the Stakeholder Consultation Process (SCP);
- 3) Comments not covered by SCP but to be added to the SCP; and
- 4) Comments outside of the scope of the project (g. Global impacts) or not covered by SCP but MTO is not prepared to commit to.

The following addresses the Ministry of Transportation's proposed responses to the review comments. Each agency that provided comments is discussed below. At the end of the discussion of agency comments are the proposed changes to the Stakeholder Consultation Process to which the MTO is prepared to commit to address new concerns.

FEDERAL AGENCIES

Canadian Transportation Agency

No major concerns have been raised. MTO is aware of the need to involve CTA if it cannot resolve discussions with the railway company, and the potential to trigger CEAA. No action is necessary by MTO or MOEE at this time.

Department of Fisheries and Oceans (DFO)

Most of the points raised are covered or will be covered through the Stakeholder Consultation Process (SCP), or will come during the design phase (i.e. specifics if Fisheries Act Authorizations are required). The SCP has always been intended to deal with both the highway and the transitway. Stormwater and drainage discussions will deal with the ultimate facility requirements.

Specific changes to SCP are proposed to address the following points raised by DFO:

- Control of entry of petroleum products, etc. into watercourses;
- Instream construction in the dry;
- Need for restoration plans;
- Having ponds off-line from streams.

The only comment that cannot be addressed is the request that future lane expansions allow for openings between the structures for light penetration. This would require significant realignment of the roadway with increased ROW causing unacceptable adverse effects at, and beyond the crossings. The issue of light penetration and potential for mitigation, if required, will be discussed as part of the SCP.

Agency Comments on Highway 407/Transitway Environmental Assessment

Environment Canada (DOE)

Most of DOE's comments are accommodated in the SCP. The SCP commits to using native species (Pg 10 - Wildlife & Corridors), and discusses the provision of opportunities to salvage seed sources (Pg 10 - Vegetation). Opportunities for use of native species, protection of seed sources and use of small demonstration plots can be reviewed as part of the SCP. No changes to the EA as submitted are required to allow for this.

DOE's comments regarding topsoil salvage are noted, however it is not possible to provide an absolute commitment to minimizing stockpile heights. There may be physical and economic constraints that prohibit this practice. The SCP does allow for further review of other opportunities for topsoil salvage and protection of seed sources. This desire to minimize stockpile heights will be stated as an objective for consideration during the development of future design, contract preparation and construction.

PROVINCIAL AGENCIES

Ministry of Environment & Energy (MOEE)

MOEE's requirement for submission of the Design and Construction (D&C) Reports for review and Approval, 90 days in advance of construction is not compatible with the negotiated review and approval requirements for this undertaking. As was the case during the course of the EA Study, there is a commitment to involve MOEE throughout the design and construction phases as part of the SCP. This is the mechanism for ensuring that MOEE's concerns are addressed. The review of the D&C Reports will provide the opportunity for confirmation of agreements reached during the SCP. Therefore a minimum 30 day review and comment period should be sufficient. If there is sufficient time in the design and construction schedule to allow a longer review period, this will be provided. This EA submission is the mechanism to address agency concerns and address formal approval requirements under the EA Act. The imposition of additional approvals at the design stage that do not already constitute a legislated requirement is unnecessary.

Changes are proposed to the SCP to address the following comments:

- Consultation on the method of assessment of noise impacts from the transitway and ancillary facilities;
- Noise-related content of the Design and Construction Reports.

Ministry of Natural Resources (MNR)

The majority of the comments made by MNR are reiteration of comments raised during consultation on the EA. They are reflected in the SCP and can be adequately addressed through the negotiated process. The SCP applies to both the roadway and the transitway, and the impacts

Agency Comments on Highway 407/Transitway Environmental Assessment

will be addressed through the SCP. The design of stormwater management and drainage features will be for the ultimate facility. No physical changes to Highway 7 east of the temporary termination of Highway 407 east of Brougham are proposed by MTO.

With regard to the remaining MNR comments:

- Existing hydrogeological information was considered as it relates to route planning/selection. No additional hydrogeological studies are currently planned. Any existing hydrogeological information will be further considered as part of the SCP. If during the design phase additional site-specific hydrogeological data is determined to be needed, further study will be carried out.
- The requirement for future lane expansions to allow for openings between the structures for light penetration. This would require significant realignment of the roadway with increased ROW, causing unacceptable adverse effects at, and beyond the crossings. The issue of light penetration and potential for mitigation, if required, will be discussed as part of the SCP.

The following change will be made to the SCP:

- The 5th bullet on Pg 7 of the SCP referring to the term "bank-full", will be replaced to reflect the requirements in MTRCA's guidelines.

MTRCA/Rouge Park Alliance

Most of the comments have been or can be addressed through the SCP as currently drafted. The SCP does include the transitway. The design of stormwater management facilities and drainage for the ultimate facility will be addressed during the SCP.

The modifications to Hwy 7 that are required as part of the undertaking have been addressed in the EA. Modifications to the N/S roadways, if identified through municipal planning processes, should be addressed through those plans.

Both MNR and MTRCA raised a question about the comments in the EA about the negative effects of natural corridors. They have suggested that what the EA meant to address were the negative effects of Transportation Corridors. The EA is correct the way it is written. There are negative effects of re-establishing natural corridors (e.g. disease transmission, dispersal of undesirable species, increased predatory risk) that are not always recognized by agency staff, that should be considered when discussing the merits of establishing natural corridors.

As is the case with any new designation, the recent expansion of the defined boundary for the Whitevale ESA will be considered during the design phase as part of the SCP. However, it must

Agency Comments on Highway 407/Transitway Environmental Assessment

be understood that this expansion of the Whitevale ESA boundary came to light after the Highway 407 alignment was set and agreed to. The route was selected through an extensive planning process that assessed the environmental sensitivities in the area and other constraints and controls which remain unchanged, therefore an alignment shifts is not warranted by the redefinition of the boundary. However, the SCP does allow for discussion of how best to design and construct the Highway 407/Transitway in this area, and all other sensitive areas.

There have been concerns expressed that Table 6.6.1 in the EA gives the impression that stormwater management and erosion control will only be considered for the major crossings. Table 6.6.1 indicates that these will be considered for "**The Entire Route**". The requirement is reiterated for major crossing, but has not been reiterated for the minor crossings. This reinforces the importance of these issues for major crossings but does not diminish the intent that they apply to all crossings.

There has also been a concern expressed that the statement in Table 6.6.1 "*bridge will be used to cross the Rouge River thereby minimizing disruption to the vegetation in the valley...*" does not recognize that the valley may need to be spanned and not just the river. It was the intent to recognize the importance of the valley system and that consideration will need to be given to spanning the valley. This will be addressed as part of the SCP. It is also noted that there are typographical errors in Table 6.6.1. The above italicized statement has been repeated for each of the major river crossings but the name of the watercourse was not changed. This will be corrected.

The following comments will be addressed through changes to the SCP:

- Regarding monitoring, MTO proposes to require environmental inspectors on site during critical construction periods. The monitoring program will be developed through the SCP.
- The 5th bullet on page 7 of the SCP has been replaced with the provisions of MTRCA's guideline as suggested in their comments

PROPOSED CHANGES TO THE STAKEHOLDER CONSULTATION PROCESS

MTO is prepared to make the following changes to the Stakeholder Consultation Process to address the concerns raised by the agencies.

Aquatic Resources

Watercourse Crossings

The following commitments are to be added to Page 7 of the SCP:

Agency Comments on Highway 407/Transitway Environmental Assessment

- Control all construction activities in such a manner as to prevent the entry of petroleum products, rubble, concrete and other debris into the watercourses. Conduct all vehicular maintenance and refuelling activities away from watercourses and watercourse banks.
- Where feasible, instream construction will be carried out in the dry.
- Rehabilitation plans for construction sites will be developed in consultation with stakeholder agencies.

The following commitment "*Avoid the placement of piers within the watercourse channel under bankfull flow conditions*" on Page 7 of the SPC will be replaced with:

- Where possible, structural abutments and piers will be located outside of the regulatory flood plain to minimize obstruction to water flow. If it becomes necessary to construct abutments or piers within the floodplain, they will be designed to minimize any impact on flood conveyance or upstream flood elevations.
- Bridge and culvert openings will be designed for the 100 year and 50 year design storm criteria respectively, as per the MTO's "Design Flood Criteria" standards and policy (Directive B-100). Impacts of the regional storm will also be assessed, and appropriate mitigation measures developed in consultation with affected stakeholders.
- Environmental inspectors will be on-site during critical construction periods.

Stormwater Management

The following commitments are to be added to Page 9 of the SCP:

- Stormwater management facilities will be constructed off-line of watercourses.

Noise

The following commitments are to be added to Page 11 of the SCP:

- Consult with the Noise Assessment Unit of the MOEE during the design phase to determine the method of assessing the noise impacts from the transitway and its ancillary facilities such as the transit stations, the maintenance/storage yards and the commuter parking lots.
- The noise component of design and construction reports submitted for review and comment will include an assessment of operational noise impacts, measures to minimize noise and vibration, and the likely effectiveness of these

Agency Comments on Highway 407/Transitway Environmental Assessment

MUNICIPALITIES

Regional Municipality of Durham

The Region of Durham has requested a by-pass of Green River. This by-pass is not required to implement the Highway 407/Transitway undertaking.

Town of Whitby

The traffic analysis conducted for Hwy 407/Transitway included all arterial roads within the Region of Durham including the Town of Whitby. The analysis demonstrates that the extension of Hwy 407 to Brock Road will have imperceptible effects on traffic volumes on Hwy 7 in the vicinity of Brooklin, and will increase traffic on Hwy 7 west of Hwy 12 (at the 1998 planning horizon) by only 7% westbound (40 vehicles per hour increase) and 1% eastbound (10 vehicles per hour increase) in the a.m. peak period. These increases are within the normal day-to-day fluctuations that can occur now with variations in conditions on Hwy 401. Similar conditions/impacts will be experienced on other roadways in the Town of Whitby. Given this, improvements to Hwy 7 east of Brock Road and roadway network improvements in the vicinity of Brooklin are not warranted at this time.

THE PUBLIC

The public comments fall generally into 5 categories:

- 1) Those who question the need for the highway
- 2) Those who question the use of a highway rather than alternatives such as transit and TDM
- 3) Those who have concerns about the environmental impacts of the Highway/Transitway
- 4) Those who have concerns about the urban sprawl effects and loss of farmland
- 5) Those who are concerned with the timetable for review

The following responses are provided for these comments:

1) Those who question the need for the highway

The need for Highway 407 has been documented in Chapter 2 of the EA. There is a clear need for additional road and transit capacity within the Highway 7 corridor east of Markham Road. The EA also demonstrates that there are limited opportunities for meeting this need through additional arterial capacity, local transit improvements and TDM measures alone.

2) Those who question the use of a highway rather than alternatives such as transit and TDM

Chapter 3 of the EA discusses alternatives to the undertaking and demonstrates that the solution to the long-term transportation needs in this corridor include road improvements, transit improvements and TDM improvements. No one type of improvement will solve the demonstrated problems. Definitely, the travel demand cannot be met without the extension of Highway 407.

3) Those who have concerns about the environmental impacts of the Highway/Transitway

Extensive studies (see Chapter 4) have been carried out to identify and address the environmental issues. The Route Planning Phase as documented in Chapter 5 of the EA shows the lengths taken to avoid environmental impacts through the selection of a technically preferred route. The environmental effects will be further minimized through the commitment to a design and construction process that involves the regulatory agencies in an unprecedented fashion. The use of a Watercourse Assessment Process for establishing the environmental protection principles that will govern the design process is unique and will ensure that environmental protection is achieved. The commitment to ongoing involvement of agencies in the design and throughout construction will further opportunities for environmental protection.

4) Those who have concerns about the urban sprawl effects and loss of farm land

The future land use form of the area has been established through approved Municipal Land Use Plans and provincial planning policies. The Highway 407 is a component of those plans. It is not appropriate to challenge approved planning directions through infrastructure projects. OMAFRA has been consulted during the EA Study and has agreed with the Hwy 407/Transitway route location and selection process and results.

5) Those who are concerned with the timetable for review

The planning of the highway/transitway has been on-going since 1989. The public and other stakeholders have had many opportunities for direct involvement in the study since that time. The EA currently under review has been available for review and comment through municipal libraries and municipal clerks' offices since mid-April, 1997.

